9-500

TM 9-500

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

DATA SHEETS FOR ORDNANCE TYPE MATERIEL

This copy is a reprint which includes current pages from Changes 1 through 4. Pen and ink changes to be made are listed in the front of the manual. Read the instructions concerning these pages before using the manual.

HEADQUARTERS, DEPARTMENT OF THE ARMY
SEPTEMBER 1962

READEX FICHE best copy available

D 101.11:

READ THESE INSTRUCTIONS CAREFULLY

1. The following pen and ink changes are to be made in the manual.

Pages	*Heading*	*Line*	*Action*
2-57	Federal Stock No.	2	Change "1005-572-5097" to "1005-561-2003".
2-59	Equipment	....	Following "Basic Issue Items:" delete "ORD 7 SNL B-29" and add "TM 9-1005-206-14P/1".
	References	....	Delete "SNL B-29" and "SB 9-112" and add "TM 9-1005-206-14P/1".
2-60	References	....	Delete "SB 9-112".
2-62	Equipment	....	Following "Basic Issue Items:" delete "ORD 7 SNL B-29" and add "TM 9-1005-206-14P/1".
	References	....	Delete "SNL B-29" and "SB-9-112" and add "TM 9-1005-206-14P/1".
2-63	References	....	Delete "SNL B-29" and "SB 9-112".

Pages	*Heading*	*Line*	*Action*
2-64	Equipment	....	Following "Basic Issue Items:" delete "ORD 7 SNL B-29" and add "TM 9-1005-206-14P/1".
	References	....	Delete "SNL B-29" and "SB-9-112" and add "TM 9-1005-206-14P/1".
2-65 and 2-66	References	....	Delete "SNL B-29".
2-78	Line item No.	1	Change "4-40784" to "4-40784-40".
	Line item No.	2	Add "4-40784-45".
3-1	....	....	Add "CANNON, 37 MILLIMETER GUN, SUB-CALIBER: M15 (See page 3-14)".
4-16	Line item No.	....	Add "4-16890-00".
4-18	Line item No.	....	Add "4-16897-04".
4-20	Line item No.	....	Add "4-16897-08".
4-22	Line item No.	....	Change "4-18322-05" to "4-18322-00".
4-24	Line item No.	....	Add "4-18318-06" and "4-18318-04".
5-7	Line item No.	....	Add "4-17000-00".
5-9	Line item No.	....	Add "4-18320-08" and "4-18320-04".
5-10	References	....	Add "TM 9-3043" and "FM 6-81".
6-5	References	....	Change "TM 9-338-11" to "TM 9-338-1", and add "SNL D-57, FM 6-69".
6-6	Line item No.	....	Add "4-18315-00".
	References	....	Add "TM 9-1055-215-20P, TM 9-1055-215-35P".
7-5	References	....	Add "TM 9-1055-212-20P, TM 9-1055-212-35P, FM 6-57".

Pages	Heading	Line	Action
7-7	Classification	....	Delete "(OTCM 37119)" and add "(for USMC use); Limited Standard (for Army use) (OTCM 38118)".
7-8	References	....	Add "TM 9-3061, FM 6-60".
7-9	References	....	Add "FM 6-59".
9-6	Line item No.	1 and 2	Add "4-37190-20" and "4-37190-30".
12-1	....	....	Delete "SCALE, GRAPHICAL FIRING: M43A1", "SCALE, GRAPHICAL FIRING: M47A1", and "SCALE, GRAPHICAL FIRING: M51A1".
12-2	....	....	Delete "SCALE, GRAPHICAL FIRING: site, M54".
12-4	References	....	Delete "TM 9-6159".
12-8	EQUIPMENT	....	Following "Basic Issue Items:" add "See TM 9-2350-206-12".
12-15	Classification	....	Following "Wind Corrector, M1" change "Standard A" to "Standard B".
12-17 12-18 12-19	References	....	Delete "TM 9-524".
12-22	References	....	Delete "TM 9-524".
12-25	References	....	Delete "TM 9-524".
12-32	General	11	After "firing scale" add "is graduated according to firing table 155-Q-3".
13-11, 13-12, 13-13, 13-14, 13-16, 13-19, 13-21, 13-23	References	....	Delete "TM 9-3026" and add "TM 9-3026-1, TM 9-3026-3" and "series" following TM 9-6081.
13-24 and 13-26	References	....	Delete "TM 9-3026" and add "TM 9-3026-1" and "series" following TM 9-6081.

Pages	*Heading*	*Line*	*Action*
13-28	References	....	Delete "TM 9-3026" and add "TM 9-3026-1, TM 9-3026-3", and add "series" following TM 9-6081.
14-18	General	4	Following "M289" add "and M386".
14-21	EQUIPMENT	....	Following "Basic Issue Items:" add "See TM 9-2350-201-12".
14-45	Model	2	Add "T41".
	Federal Stock No.	2	Add "1240-763-3148".
	General	2	Between "finder" and "operated" add "for the TANK, COMBAT, FULL TRACKED: 90-mm gun, M47. It is".
14-46	EQUIPMENT	....	Following "Basic Issue Items:" add "See ORD 7 SNL G-262".
14-49	EQUIPMENT	....	Following "Basic Issue Items:" add "See TM 9-2350-206-12".
14-69	Classification	....	Add "Obsoletion pending".
14-80	EQUIPMENT	....	Following "Basic Issue Items:" add "See TM 9-2350-210-12".
15-1	....	....	Add "POWER CONTROL: M3A1(M3E1) (For characteristics and data, see item in section 18)."
19-3	STORAGE AND SHIPMENT DATA	6 and 14	In line with "Volume ——" add "149 cu ft".
		8 and 16	In line with "Ship tons ——" add "3.73".
19-34	General	2	Delete ", AN/MSA-7A, AN/MSA-17, and AN/MSA-17A,".
19-66	Model	1 and 2	Change "TS-847" to "TS-847/MSW-1" and "TS-847A" to "TS-847A/MSW-1".
19-110	STORAGE AND SHIPMENT DATA	8 and 16	In line with "Ship tons ——" change "0.47" to "0.05"
19-124	Model	5	Delete "and" following "high explosive", and change "antpiersonnel" to "antipersonnel".
19-155 and 19-161	References	....	Delete "TM 9-5076-10" and add "TM 9-5076-12, TM 9-5076-35".
19-200	General	4	Change "***¾-ton, 4 x 4, M37 cargo truck" to "TRUCK, CARGO: ¾-ton, 4 x 4, M37*".

Pages	*Heading*	*Line*	*Action*
19-200	....	....	Add footnote "*For characteristics and data, see item in section 21".
19-207	Title	....	Change to "SEMITRAILER, TANK: ALCOHOL, M388".
19-218	Classification	....	Change "3734" to "37334".
19-221	....	....	Delete "HEATING AND TIEDOWN UNIT, 762-MM ROCKET, TRUNK MOUNTED: M46".
19-223	Title	....	Change to "HANDLING UNIT, ROCKET, TRAILER MOUNTED: 762-MM, M405 AND M405A1".
19-230	....	1	Change "XM1" to "M1".
		2	Following "M14" and "(XM449)".
		4	Delete "LAUNCHER, 318-MM ROCKET: XM32".
19-231	Classification	....	Change "37479" to "37861".
19-232	Title	....	Following "M14" add "(XM449)".
19-233	References	....	Add "TM 9-1055-212-20P, TM 9-1055-212-35, TM 9-1055-212-35P".
19-234	Classification	....	Add "Standard A (OTCM 37861)".
	References	....	Add "TM 9-1340-204-20P, TM 9-1340-204-35P".
19-235	EQUIPMENT	....	Following "Basic Issue Items:" delete "See TM 9-3162-12, appendix III".
	References	....	Delete "TM 9-3162-12".

Pages	*Heading*	*Line*	*Action*
21-9	Title	....	Change "CARRIER, LIGHT WEAPONS: ***, M274" to "TRUCK, PLATFORM, UTILITY: ½-ton, 4 x 4, M274".
	Classification	....	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC 126)".
21-47	Line item No.	1	Add "4-44250-46".
21-50	....	....	Below "INSTRUCTIONAL MATERIAL" add the following: "EQUIPMENT" "Basic Issue Items: See TM 9-8030".
	References	....	Delete "SNL F-741".
21-51	Classification	....	Change "Standard B (OTCM 36841)" to "Limited standard (AMCTC 127)".
	Line item No.	1	Add "4-6110-34".
21-53	Classification	....	Change "Standard B (OTCM 37119)" to "Limited standard (AMCTC 127)".
21-73	Model	1	Between "M215" and "w/e" add ", w/wn,".
	Model	2	Add "M215, w/o wn".
	Line item No.	2	Add "4-60680-24".
	Federal Stock No.	2	Add "2820-834-4509".
	Classification	....	Change "Standard B (OTCM 36841)" to "Limited standard (AMCTC 136)".
21-75	Model	1	Between "M51" and "w/e" add "w/o wn,".
21-83	Model	3 and 4	Add "M49, w/wn" and "M49C, wn".
	Line item No.	3 and 4	Add "4-61327-00" and "4-61329-00".
	Federal Stock No.	3 and 4	Add "2320-835-8341" and "2320-141-8237".
21-85	Classification	....	Change "Standard B (OTCM 37057)" to "Limited standard (AMCTC 127)".
21-95	Line item No.	2	Change "4-61420-20" to "4-61430-20".

Pages	*Heading*	*Line*	*Action*
21-107	General	3	Change "RIFLE, 105 MILLIMETER: M27 or M27A1" to "RIFLE, 106 MILLIMETER: M40A1".
21-116	Model	1	Change "M220 w/o winch" to "M220, w/open cab".
		2	Change "M220C" to "M220, w/closed cab".
		3	Add "M220C".
	Line item No.	2	Delete "4-61834-35".
		3	Add "4-61834-35".
21-120	Line item No.	1	Add "4-61880-00".
21-123	References	....	Add "TM 9-2320-211-20P".
23-8	Footnote	....	Change "section 4" to "section 5".
23-10	Classification	....	Change "Standard A (OTCM 36841)" to "Standard B (OTCM 37877)".
23-11	EQUIPMENT	....	Following "Basic Issue Item:" add "See TM 9-2350-210-12".
	References	....	Add "TM 9-2300-223-20P, FM 6-93".
24-1	....	....	Delete "TRACTOR, FULL TRACKED, HIGH SPEED: 18-ton, M4, M4A1, M4A1C, M4A2, and M4C".
25-4	References	....	Add "TM 9-2590-206-15, TM 9-2590-206-25P".
26-1	....	2	Change to "STOP WATCH: navigation, ground speed, type A-8".
		4	Change to "STOP WATCH: timer, automatic M1, astronomic observation".
		7	Following "WRIST, WATCH:" add "grade II".
26-3	Title	....	Change to "STOP WATCH: NAVIGATION, GROUND SPEED, TYPE A-8".
26-5	Title	....	Change to "STOP WATCH: TIMER, AUTOMATIC, M1, ASTRONOMIC OBSERVATION".
26-6	References	....	Following "SNL F-187," add "(ORD 9 only)" and "SNL F-36 (ORD 8 only)".
26-8	Title	....	Following "WATCH, WRIST" add ": GRADE II".
27-1	....	12	Following "PERISCOPE" delete "M14". Add "PERISCOPE, TANK: M45 (See page 27-23).

2. The following pen and ink changes are to be made in the manual.

Page	*Heading*	*Line*	*Action*
1-1	Scope	-----	Change subparagraph *g* to "any errors or omissions will be forwarded on DA Form 2028 direct to Commanding Officer, Letterkenny Army Depot, ATTN: SSMLE-NPW Chambersburg, Pa. 17201".
2-2	--------	10	Change to "Machinegun, Caliber .50: M85".
			Change to "Machinegun, 7.62-Millimeter: M73".
2-13	General	3	Following "M60", add "and M60A1".
2-38	--------	-----	Delete "M85C" wherever it appears on the page.
2-78	References	-----	Delete "SNL B-9, TM 9-285, SB 9-117" and add "TM 9-1005-206-14P/2".
2-79	Federal stock No.	-----	Change "1005-731-2036" to "1005-677-9150".
	EQUIPMENT	-----	Following Basic Issue Items: Delete "ORD 7 SNL B-9" and add "See TM 9-1005-206-14P/2".
	References	-----	Delete "SNL B-9, TM 9-285, SB 9-117" and add "TM 9-1005-206-14P/2".
4-25	PERFORMANCE	4	Add "HEP-(T) (charge not adjustable)--------2,060 fps".
		8	Add "HEP-(T) (Reticle max range)--------2,200 meters".
	INSTRUCTIONAL MATERIAL	4	Delete "* * * FT 105-H-4" and add "FT 105-H-6".
4-33	References	-----	Add "TM 9-1015-217-35P".
4-41	References	-----	Add "TM 9-1015-220-34, TM 9-1015-220-35P, TM 9-1015-220-50".
5-3	General	3	Change "GUN, SELF-PROPELLED, FULL-TRACKED:" to "GUN, FIELD ARTILLERY, SELF-PROPELLED:"
5-4	References	-----	Delete "SNL D-49" and add "TM 9-1000-217-35P".
5-5	General	3	Change "HOWITZER, SELF-PROPELLED, FULL-TRACKED:" to "HOWITZER, MEDIUM, SELF-PROPELLED:"
5-6	References	-----	Delete "SNL D-50, SNL D-63" and add "TM 9-1025-203-35P".
5-10	PERFORMANCE	2-4	Change "HE, CHEM SMOKE BE (Chg 7)--------1,850 fps SMOKE, BE (colored) (Chg 7)--------1,902 fps ILLUM (Chg 5 only)--------1,160 fps" to "HE, CHEM, SMOKE, BE, WP, and COLORED (Chg 7)--------1,850 fps ILLUM (Chg 7)--------1,775 fps".
		6-12	Change "HE, CHEM (Chg 7)--------16,355 yd SMOKE BE (HC) (Chg 7) (limited by 25 sec fuze)--------9,700 yd SMOKE BE (colored) (Chg 7) (limited by 25 sec fuze) --------9,700 yd ILLUM (Chg 5 only) (limited by 25 sec fuze)--------7,100 yd (limited by 25 sec fuze)-------- 9,000 yd" to "HE, CHEM, SMOKE BE WP (Chg 7) --------16,600 meters SMOKE, BE, COLORED (Chg 7) --------15,535 meters ILLUM (Chg 7)--------11,600 meters".
		14-17	Delete "First ½ min--------2rd * * * Prolonged fire-------- 40 rd per hr" and add "Rapid burst--------1 rd per minute".
	EQUIPMENT	-----	Between "MOUNT, TELESCOPE: M25" and "TELESCOPE PANORAMIC: M12A7C", add "TABLE, FIRING: FT-155-Q-3".
	Reference	-----	Add "FM 6-81".
5-11	Title	-----	Change to "Cannon, 155-Millimeter Howitzer: M126 (T255E3); Mount, Howitzer: M127 (XM127)".
	Model	-----	Change under "Cannon" to "M126 (T255E3)"; under "Mount" to "M127 (XM127)".

Page	Heading	Line	Action
5-11	General	1	Change to "Cannon 155-Millimeter Howitzer: M126 (T255E3); Mount, Howitzer: 155-mm, M127 (XM127)".
6-2	PERFORMANCE	2	Change "Range--------18,510 yd" to "Range (max)--------16,800 meters".
		3	Change "Rate of fire--------" to "Rate of fire: Maximum--------1 rd per min Normal--------1 rd per 2 min".
6-3	EQUIPMENT	-----	Add "TABLE, FIRING: FT 8-J-3" and "TABLE, FIRING: FT 8-0-3".
	References	-----	Delete "SNL D-49" and add "FM 6-93 and TM 9-1000-217-35P".
6-7	PERFORMANCE	2	Change "Range (max)--------18,510 yd" to "Range (max) --------16,800 meters".
	EQUIPMENT	13	Delete "TABLE, FIRING: FT 8-J-1", add "TABLE, FIRING: FT 8-J-3" and "TABLE, FIRING: FT 8-0-3".
		17	Following "Basic Issue Items:" Delete "ORD 7 SNL D-29" and add "TM 9-3004".
	References	2	Add "FM 6-90".
9-2	ORD A1156	-----	Change "AN-M8, W/MOUNT M1" to "MOUNT M1".
	EQUIPMENT	-----	Following "Basic Issue Items" add "See TM 9-1095-201-15".
9-2, 9-3, 9-4	References	-----	Delete "TM 9-1290, TM 9-2018".
9-3, 9-4	References	-----	Add "TM 9-1095-201-15".
9-5	References	-----	Delete "SNL B-8" and add "TM 9-1005-206-14P/2".
12-1	--------	-----	Change "COMPUTER, BALLISTICS: M13 (T31), M13A1 (T31E1), M13A1C, and M13A1D" to read "COMPUTER, BALLISTICS: M13 (T31), M13A1 (T31E1), M13A1C, M13A2, M13A1D, and M13B1C".
	--------	-----	Add "COMPUTER, GUN DIRECTION: M18, W/E--------12-6.1".
	--------	10	After "DRIVE, BALLISTICS: M10 (T24E3)", add "M10A4 and M10B1".
14-1	--------	-----	Add "MOUNT, TANK PERISCOPE: M105 (T185)--------14-26.1".
	--------	-----	Add "PERISCOPE, TANK: M37--------14-44.1".
14-2	--------	-----	Add "SIGHTUNIT: M53--------14-66.1".
	--------	20	Change "(--------FIRE CONTROL, ANTIAIRCRAFT: --------)" to "(--------FIRE CONTROL SYSTEM, ANTIAIRCRAFT:--------)".
	--------	43	Change "TELESCOPE: M118C (T176E3) and M118 (T176E2)" to "TELESCOPE, ELBOW: M118 (T176E3) and M118C (T176E2)".
14-45	General	-----	Add as the last sentence "The range finder is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M47".
14-102	Title	-----	Change to "TELESCOPE, ELBOW: M118 (T176E3) and M118C (T176E2)".
15-2, 15-3	References	-----	Delete "TM 9-1731D".
18-1	--------	34	Delete "MOUNT, PERISCOPE: M105 (T185)".
18-2	--------	24	Following "M13A1", add "M13A3 (M13A2E1), and M13B1".
	--------	29	Change to "REMOTE CONTROL SYSTEM, ANTIAIRCRAFT GUN: M2A1".
	--------	30	Change to "REMOTE CONTROL SYSTEM, ANTIAIRCRAFT GUN: M12A1".
18-47, 18-48	EQUIPMENT	-----	Following "Basic Issue Items:" add "See ORD 7 SNL G-238".

Page	*Heading*	*Line*	*Action*
18-58, 18-59, 18-60	References	-----	Add "TM 9-575".
18-68	Title General	1	Change to "REMOTE CONTROL SYSTEM, ANTIAIRCRAFT GUN: M2A1".
18-73	Title	-----	Change to "REMOTE CONTROL SYSTEM, ANTIAIRCRAFT GUN: M12A1".
18-74	General	1	Change to "REMOTE CONTROL SYSTEM, ANTIARCRAFT GUN: M12A1".
19-2	--------	3	Change "AN/TSW-XO-2" to "AN/TSW-2 (XO-2)".
	--------	4	Change "AN/TSW-XO-3" to "AN/TSW-2 (XO-3)".
19-3	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1410-500-12" and add "TM 9-1410-500-12P/1, TM 9-1410-500-12P/2".
19-4	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-505-12/1" and add "TM 9-1430-505-12P/1, TM 9-1430-505-12P/2".
19-5	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-501-12" and add "TM 9-1430-501-12P/1, TM 9-1430-501-12P/2".
19-6	EQUIPMENT	-----	Following "Basic Issue Items:" add "TM 9-1430-501-12P/1, TM 9-1430-501-12P/2".
19-7	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-500-12/1" and add "TM 9-1440-500-12P/1, TM 9-1440-500-12P/2".
19-9	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-503-12" and add "TM 9-1430-503-12P/1, TM 9-1430-503-12P/2".
19-10	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-504-12" and add "TM 9-1430-504-12P/1, TM 9-1430-504-12P/2".
19-12	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-502-12" and add "TM 9-1430-502-12P/1, TM 9-1430-502-12P/2".
19-15	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-4935-501-12/1" and add "TM 9-4935-501-12P/1, TM 9-4935-501-12P/2".
19-16	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-4935-500-12/1" and add "TM 9-4935-500-12P/1, TM 9-4935-500-12P/2".
19-79	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/2/1".
	References	-----	Delete "TM 9-1450-25-10P, TM 9-1450-250-20P/2, and TM 9-1450-250-35P/2" and add "TM 9-1450-250-12P/2/1, TM 9-1450-250-12P/2/2, TM 9-1450-250-35P/2/1, TM 9-1450-250-35P/2/2".
19-80	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-250-10" and add "TM 9-1450-250-12P/1".
19-82	References	-----	Delete "TM 9-1430-250-20P/1 and TM 9-1430-250-35P/1" and add "TM 9-1450-250-12P/1, TM 9-1430-250-35P/1/1, TM 9-1430-250-35P/1/2".
19-83	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-250-10" and add "TM 9-1430-250-12P/2/1".
19-84	References	-----	Delete "TM 9-1430-250-20P/2 and TM 9-1430-250-35P/2" and add "TM 9-1430-250-12P/2/1, TM 9-1430-250-12P/2/2, TM 9-1430-250-35P/2/1, TM 9-1430-250-35P/2/2".
19-85	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-250-10" and add "TM 9-1430-250-12P/3/1".
	References	-----	Delete "TM 9-1430-250-20P/3 and TM 9-1430-250-35P/3" and add "TM 9-1430-250-12P/3/1, TM 9-1430-250-12P/3/2, TM 9-1430-250-35P/3/1, TM 9-1430-250-35P/3/2".

Page	*Heading*	*Line*	*Action*
19-86	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-250-10" and add "TM 9-1430-250-12P/3/1".
	References	-----	Delete "SNL Y26, TM 9-1430-250-20P/3 and TM 9-1430-250-35P/3" and add "SNL Y27, TM 9-1430-250-12P/3/1, TM 9-1430-250-12P/3/2, TM 9-1430-250-35P/3/1, TM 9-1430-250-35P/3/2".
19-87	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-1450-250-12P/4/1".
	References	-----	Add "SNL J753-1A, TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-35P/4/1, TM 9-1450-250-35P/4/2".
19-88	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-1450-250-12P/4/1".
	References	-----	Delete "TM 9-1450-250-20P/4 and TM 9-1450-250-35P/4" and add "TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-250-35P/4/1, TM 9-1450-250-35P/4/2"
19-89	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-1450-250-12P/4/1".
	References	-----	Delete "SNL J753-1, TM 9-1450-250-20P/4, and TM 9-1450-250-35P/4" and add "SNL J753-1B, TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-250-35P/4/1, TM 9-1450-250-35P/4/2".
19-90	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/4/1".
	References	-----	Delete "SNL J753-1, TM 9-1450-250-20P/4 and TM 9-1450-250-35P/4" and add "SNL J753-1C, TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-250-35P/4/1, TM 9-1450-250-35P/4/2".
19-91	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/4/1".
	References	-----	Delete "SNL J753-1, TM 9-1450-250-20P/4 and TM 9-1450-250-35P/4" and add "SNL J753-1D, TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-250-35P/4/1, TM 9-1450-250-35P/4/2".
19-92	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/4/1".
	References	-----	Delete "SNL J753-1, TM 9-1450-250-20P/4 and TM 9-1450-250-35P/4" and add "SNL J573-1E, TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-250-35P/4/1, TM 9-1450-250-35P/4/2".
19-93	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-250-10" and add "TM 9-1440-250-12P/3/1".
	References	-----	Delete "TM 9-1440-250-20P/1 and TM 9-1440-250-35P/1" and add "SNL Y81, TM 9-1440-250-12P/3/1, TM 9-1440-250-12P/3/2, TM 9-1440-250-35P/3/1, TM 9-1440-250-35P/3/2".
19-94	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-250-10" and add "TM 9-1440-250-12P/1/1".
	References	-----	Delete "TM 9-1440-250-20P/1 and TM 9-1440-250-35P/1" and add "SNL Y75-2, TM 9-1440-250-12P/1/1, TM 9-1440-250-12P/1/2, TM 9-1440-250-35P/1/1, TM 9-1440-250-35P/1/2".
19-95	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1430-250-10, appendix II" and add "TM 9-1430-250-12P/4/1".
	References	-----	Delete "TM 9-1430-250-20P/4 and TM 9-1430-250-35P/4" and add "SNL Y28, TM 9-1430-250-12P/4/1, TM 9-1430-250-12P/4/2, TM 9-1430-250-35P/4/1, TM 9-1430-250-35P/4/2".

Page	*Heading*	*Line*	*Action*
19-96	EQUIPMENT	-----	Following "Basic Issue Items:" delete "ORD 7 SNL Y4-6" and add "TM 9-1430-250-12P/21/1".
	References	-----	Add "TM 9-1430-250-12P/21/1, TM 9-1430-250-12P/21/2, TM 9-1430-250-35P/21/1, TM 9-1430-250-35P/21/2".
19-100	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/3"
	References	-----	Delete "TM 9-1450-250-20P/3 and TM 9-1450-250-35P/3" and add "SNL Y88, TM 9-1450-250-12P/3, TM 9-1450-250-35P/3/1, TM 9-1450-250-35P/3/2".
19-101	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/4/1".
	References	-----	Delete "SNL J753-1, TM 9-1450-250-20P/4 and TM 9-1450-250-35P/4" and add "SNL J753-1F, TM 9-1450-250-12P/4/1, TM 9-1450-250-12P/4/2, TM 9-1450-250-35P/4/1, TM 9-1450-250-35P/4/2".
19-102	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-250-10" and add "TM 9-1440-250-12P/1/1".
	References	-----	Delete "TM 9-1440-250-20P/1 and TM 9-1440-250-35P/1" and add "TM 9-1440-250-12P/1/1, TM 9-1440-250-12P/1/2, TM 9-1440-250-35P/1/1, TM 9-1440-250-35P/1/2".
19-105	References	-----	Add "SNL Y77-1, S812, TM 9-1410-250-12P/1/1, TM 9-1410-250-12P/1/2, TM 9-1410-250-35P/1/1, TM 9-1410-250-35P/1/2, TM 9-1410-206-35P".
19-106	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-250-10" and add "TM 9-1440-250-12P/2/1".
	References	-----	Delete "TM 9-1440-250-20P/2 and TM 9-1440-250-35P/2" and add "TM 9-1440-250-12P/2/1, TM 9-1440-250-12P/2/2, TM 9-1440-250-35P/2/1, TM 9-1440-250-35P/2/2".
19-108	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-1440-250-12P/1/1".
	References	-----	Delete "TM 9-1440-250-20P/1 and TM 9-1440-250-35P/1" and add "SNL Y75-4, TM 9-1440-250-12P/1/1, TM 9-1440-250-12P/1/2, TM 9-1440-250-35P/1/1, TM 9-1440-250-35P/1/2".
19-109	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-250-12" and add "TM 9-1440-250-12P/6/1".
	References	-----	Add "SNL Y86, TM 9-1440-250-12P/6/1, TM 9-1440-250-12P/6/2, TM 9-1440-250-35P/6/1, TM 9-1440-250-35P/6/2".
19-110	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/2/1".
	References	-----	Delete "TM 9-1450-250-20P/2 and TM 9-1450-250-35P/2" and add "SNL Y87-4, TM 9-1450-250-12P/2/1, TM 9-1450-250-12P/2/2, TM 9-1450-250-35P/2/1, TM 9-1450-250-35P/2/2".
19-111	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-1440-250-12P/1/1".
	References	-----	Delete "TM 9-1440-250-20P/2 and TM 9-1440-250-35P/2" and add "SNL Y75-3, TM 9-1440-250-12P/1/1, TM 9-1440-250-12P/1/2, TM 9-1440-250-35P/1/1, TM 9-1440-250-35P/1/2".
19-112	EQUIPMENT	-----	Following "Basic Issue Items:" delete "TM 9-1440-250-10" and add "TM 9-1440-250-12P/4/1".
	References	-----	Delete "TM 9-1440-250-20P/4 and TM 9-1440-250-35P/4" and add "SNL Y90, TM 9-1440-250-12P/4/1, TM 9-1440-250-12P/4/2, TM 9-1440-250-35P/4/1, TM 9-1440-250-35P/4/2".

Page	*Heading*	*Line*	*Action*
19-113	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-1410-250-12P/2".
	References	-----	Delete "TM 9-1410-250-20P/2" and add "SNL Y31, TM 9-1410-250-12P/2, TM 9-1410-250-35P/2/1, TM 9-1410-250-35P/2/2".
19-114	Federal Stock No.	-----	Delete "4935-664-3624" and add "4935-664-3621".
	EQUIPMENT	-----	Following "Basic Issue Items:" add "See TM 9-4935-253-12P/1/1".
	References	-----	Delete "TM 9-4935-253-20P/1 and TM 9-4935-253-35P/1" and add "SNL Y166, TM 9-4935-253-12P/1/1, TM 9-4935-253-12P/1/2, TM 9-4935-253-35P/1/1, TM 9-4935-253-35P/1/2".
19-115	EQUIPMENT	-----	Following "Basic Issue Items:" add "TM 9-4935-253-12P/2/1".
	References	-----	Add "TM 9-4935-253-12P/2/1, TM 9-4935-253-12P/2/2, TM 9-4935-253-35P/2/1, TM 9-4935-253-35P/2/2".
19-116	EQUIPMENT	-----	Following "Basic Issue Items:" Delete "ORD 7 SNL Y20" and add "TM 9-1440-250-12P/5".
	References	-----	Add "TM 9-1440-250-12P/5, TM 9-1440-250-35P/5/1, TM 9-1440-250-35P/5/2".
19-117	EQUIPMENT	-----	Following "Basic Issue Items:" Delete "TM 9-1430-250-10" and add "TM 9-1430-250-12P/5/1".
	References	-----	Delete "TM 9-1430-250-30P/5 and TM 9-1430-250-35P/5".
19-118	EQUIPMENT	-----	Following "Basic Issue Items:" Delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/2/1".
	References	-----	Delete "TM 9-1450-250-20P/3 and TM 9-1450-250-35P/2" and add "SNL Y87-1, TM 9-1450-250-12P/2/1, TM 9-1450-250-12P/2/2, TM 9-1450-250-35P/2/1, TM 9-1450-250-35P/2/2".
19-119	EQUIPMENT	-----	Following "Basic Issue Items:" Delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/2/1".
	References	-----	Delete "TM 9-1450-250-20P/2 and TM 9-1450-250-35P/2" and add "SNL Y87-5, TM 9-1450-250-12P/2/1, TM 9-1450-250-12P/2/2, TM 9-1450-250-35P/2/1 and TM 9-1450-250-35P/2/2".
19-120	EQUIPMENT	-----	Following "Basic Issue Items:" Delete "TM 9-1450-250-12" and add "TM 9-1450-250-12P/2/1".
	References	-----	Delete "TM 9-1450-250-20P/2 and TM 9-1450-250-35P/2" and add "SNL Y87-2, TM 9-1450-250-12P/2/1, TM 9-1450-250-12P/2/2, TM 9-1450-250-35P/2/1, TM 9-1450-250-35P/2/2".
19-121	References	-----	Delete "SNL Y025" and add "TM 9-1440-250-12P/1/1, TM 9-1440-250-12P/1/2, TM 9-1440-250-35P/1/1, TM 9-1440-250-35P/1/2".
19-222	References	-----	Add "TM 9-1055-204-20P, TM 9-1055-204-35, TM 9-1055-204-35P".
19-224	References	-----	Delete "TM 9-1055-208-15" and add "TM 9-1055-208-20P, TM 9-1055-208-35, TM 9-1055-208-35P".
19-226	---------	-----	Add "TM 9-1055-203-25P".
19-227	EQUIPMENT	-----	Delete "TM 9-1340-202-12, Appendix III" and add "TM 9-1340-202-12P".
19-229	EQUIPMENT	-----	Delete "TM 9-1340-202-12, Appendix III" and add "TM 9-1340-202-12P".
19-231	Federal stock No.	-----	Add "1670-606-8410".
19-234	EQUIPMENT	-----	Delete "TM 9-1340-204-12, Appendix III" and add "TM 9-1340-204-12P".

Page	*Heading*	*Line*	*Action*
20-1	--------	2	Change "M4381" to "M43B1".
20-3	References	-----	Change "TM 9-8015" to "TM 9-8015-2" and add "TM 9-2320-208-20P".
21-20, 21-22, 21-24	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-26	References	-----	Add "TM 9-2320-209-35P".
21-49	Line item No.	3	Change "4-60050-25" to "4-60080-25".
		4	Change "4-60050-91" to "4-60080-91".
21-54, 21-58	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-68	References	4	Change "TM 9-2320-206-12" to "TM 9-2320-206-20P".
21-72	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-83	Model	2	Following "segregator kit", add "w/o winch".
	Federal stock No.	2	Change "2320-141-8325" to "2320-141-8235".
21-84	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-88	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-95	Model	1	Following "M275, w/e", add "(soft top)".
		2	Following "M275, w/wn, w/e", add "(soft top)".
		3	Add "M275, w/e (hard top)".
		4	Add "M275, w/wn, w/e (hard top)".
	Federal stock No.	3	Add "2320-287-5735".
		4	Add "2320-287-5734".
21-96	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-100	References	-----	Add "TM 9-2320-206-20P".
21-101	Classification	-----	Change "M26A" to "M26A1".
21-113, 21-119	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-121	References	-----	Add "TM 9-2320-209-35P, TM 9-2300-223-20P".
21-124	--------	-----	After "For characteristics and data, * * *", change "21-17" to "21-33".
22-8	References	-----	Add "TM 9-2300-223-20P".
22-11	Federal stock No.	4	Add "2330-690-8363".
		5	Add "2330-690-8364".
22-13	Federal stock No.	1	Add "2330-705-8946".
22-28	Model	1	Change "172" to "M172".
		2	Change "172A1" to "M172A1".
	Differences among models	1	Delete "early type".
		2	Delete "and air brakes" and "late type".
		3	Delete "air-over-hydraulic brake".
	CHARACTERISTICS	49	After "Type--------", change "air-over-hydraulic" to "air".
22-36	CHARACTERISTICS	1	Delete "Electrical system—Continued".
22-38	References	-----	Add "TM 9-2330-208-24P".
22-42	References	-----	Add "TM 9-2300-223-20P".
22-43	Federal stock No.	6	Add "2330-797-7405".
22-44	References	-----	Add "TM 9-2330-246-24P, TM 9-2300-223-20P".
23-1	--------	-----	Add "TANK, COMBAT, FULL TRACKED: 90-mm GUN, M48A3 (M48A1E2)--------23-31.1".
		19	After "M60", add "and M60A1".
		21	Change page number to "23-36".
23-3	CHARACTERISTICS	11	Change "AOS1-895-5" to "AOSI-895-5".
23-6	CHARACTERISTICS Engine	2	Change "AO1-402-5" to "AOI-403-5".

Page	*Heading*	*Line*	*Action*
23-17	References	-----	Add "FM 6-92".
23-21	EQUIPMENT Sighting and Fire Control:	1	Change "MOUNT, PERISCOPE: M05" to "MOUNT, PERISCOPE: M106".
23-27	EQUIPMENT Sighting and Fire Control:	3	Change "DRIVE, BALLISTIICS: M45" to "DRIVE, BALLISTICS: M5".
27-1	---------	-----	Add "BINOCULAR: INFRARED, M18---------27-10.1".
27-2	CLASSIFICATION	-----	Add "Standard B (OTCM 37927)".

3. The following pen and ink changes are to be made in the manual.

Pages	*Heading*	*Line*	*Action*
2-1	--------------------	1-5	Delete "ARMAMENT SUBSYSTEM, HELICOPTER,*** (see page 2-81)".
	--------------------	6	Change "XM2" to "M2 (XM2)".
	--------------------	8	Change "8421961" to "7791961", and "(see page 2-83)" to "(see page 2-81)".
	--------------------	9-11	Delete "ARMAMENT SUBSYSTEM, HELICOPTER, *** (see page 2-84)", and add "ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: QUAD, M6 (XM6E3) (MACHINEGUN, 7.62-MILLIMETER: M60CA1; MOUNT, MACHINEGUN, 7.62-MM, HELICOPTER ARMAMENT SUBSYSTEM (7792569)) (see page 2-83)".

Pages	*Heading*	*Line*	*Action*
2-1	--------------------	------	Add "ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: DOOR MOUNTED, LIGHTWEIGHT, XM23 (MACHINEGUN, 7.62-MILLIMETER: XM60D; MOUNT ASSEMBLY, LEFT SIDE (49937) AND MOUNT ASSEMBLY, RIGHT SIDE (49936)) (see page 2-92)".
	--------------------	------	Add "ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: DOOR MOUNTED, LIGHTWEIGHT, XM24 (MACHINEGUN, 7.62-MILLIMETER: XM60D; MOUNT ASSEMBLY, LEFT SIDE (50599) AND MOUNT ASSEMBLY, RIGHT SIDE (50600)) (see page 2-93)".
	--------------------	------	Add "GUN, AUTOMATIC, 7.62-MILLIMETER: GAU-2B/A (see page 2-94)".
	--------------------	------	Add "POD, AIRCRAFT GUN, 7.62-MILLIMETER: SUU-11A/A (see page 2-95)".
	--------------------	36	Following "(T52)" add "and M24A1".
2-2	--------------------	------	Add "RIFLE, 5.56-MM: M16 AND XM16E1 (see page 2-96)"
2-4	References	------	Delete "TM 9-1005-237-14P", and add "TM 9-1005-237-15P".
2-5	References	------	Delete "TM 9-1005-237-14P and TM 9-2023-1", and add "TM 9-1005-237-15P".
2-6	References	------	Delete "TM 9-1005-237-14P", and add "TM 9-1005-237-15P".
2-7	References	------	Delete "SNL B-28", and add "TM 9-1005-210-12P, TM 9-1005-210-35P".
2-8	References	------	Delete "SNL B-28", and add "TM 9-1005-210-12P, TM 9-1005-210-35P".
	Classification	------	Change "Standard C (OTCM 37119)" to "Standard B (AMCTC item 3507)".
2-9	References	------	Delete "SNL A-55, Sec 33".
2-10	--------------------	------	Mark page "deleted". (*Note.* Retain page 2-9.) Chart is obsolete.
2-11	References	------	Delete "SNL A-38", and add "TM 9-1005-213-35P".
2-23	References	------	Add "TO 34Y 36-2-11".
2-24	CHARACTERISTICS	9	In line with "Horsepower ----", add "¼".
		11	In line with "Cycle ----", add "60".
		12	In line with "Phase ----", add "single".
	STORAGE AND SHIPMENT DATA	2	Between "Shipped" and "linker-delinker", add "1". Following "per", add "shipping container".
		3	In line with "Length ----", add "45½ in.".
		4	In line with "Width ----", add "36¼ in.".
		5	In line with "Height ----", add "17¼ in.".
		6	In line with "Volume ----", add "16 cu ft".
		7	In line with "Gross weight ----", add "200 lb".
		8	In line with "Ship tons ----", add "0.10".
2-29	References	------	Delete "SNL A-5" and "TM 9-2005", and add "TM 9-1005-212-12P, TM 9-1005-212-35".
2-31	References	------	Delete "SNL A-6" and "TM 9-2005", and add "TM 9-1005-212-12P, TM 9-1005-212-35".
2-36	References	------	Delete "TM 9-2021", and add "TM 9-1005-213-34".
2-37	References	------	Delete "TM 9-2021", and add "TM 9-1005-213-34".
2-39	References	------	Change "TM 9-1005-224-34P" to "TM 9-1005-224-35P".
2-44	References	------	Delete "TM 9-230".
2-46	References	------	Delete "SNL A-6" and "TM 9-2005", and add "TM 9-1005-212-12P, TM 9-1005-212-35".
2-47	References	------	Delete "SNL A-5" and "TM 9-2005", and add "TM 9-1005-212-12P, TM 9-1005-212-35".
2-48	References	------	Delete "SNL A-39", and add "TM 9-1005-213-12P, TM 9-1005-213-34, TM 9-1005-213-35P".
2-49	References	------	Delete "TM 9-1005-224-34P", and add "TM 9-1005-224-35P".

Pages	Heading	Line	Action
2-70	References	------	Delete "TM 9-270".
2-71	EQUIPMENT	------	Following "Basic Issue Items:" delete "See ORD 7 SNL B-50".
	References	------	Delete "SB 9-135" and "SNL B-50", and add "TM 9-1005-206-14P/4".
2-72	EQUIPMENT	------	Following "Basic Issue Items:" delete "SNL A-4", and add "TM 9-1005-208-12P".
	References	------	Delete "SNL A-4" and "TM 9-2111-1", and add "TM 9-1005-208-35".
2-74	References	------	Delete "TM 9-2023-1".
2-78	--------------------	------	Change "Stevens, Model M520-30" to "Stevens, Model M520A" wherever it appears on the page.
	EQUIPMENT	------	Following "Basic Issue Items:" delete "ORD 7 SNL B-9", and add "TM 9-1005-206-14P/2".
	References	------	Delete "SNL B-9", "TM 9-285", "SB 9-117", and add "TM 9-1005-206-14P/2".
2-79	Federal stock No.	------	Change "1005-731-2036" to "1005-677-9150".
	EQUIPMENT	------	Following "Basic Issue Items:" delete "SNL B-9", and add "TM 9-1005-206-14P/2".
	References	------	Delete "SNL B-9, TM 9-285, and SB 9-117", and add "TM 9-1005-206-14P/2".
2-80	EQUIPMENT	------	Following "Basic Issue Items:" delete "See ORD 7 SNL A-58", and add "See TM 9-1005-229-12P".
2-81 2-82	--------------------	------	XM1 HELICOPTER ARMAMENT SUBSYSTEM was obsoleted and XME1 was converted to M2 ARMAMENT SUBSYSTEM by MWO 9-1005-240-30/2. Reason for equipment change to pages.
2-83 2-84	--------------------	------	Equipment change to pages, see above.
2-91	Federal stock No.	------	Change "1005-690-3220" to "1005-976-9231".
	EQUIPMENT	------	Following "Basic Issue Items:" add "See TM 9-1005-206-14P/3".
	References	------	Add "TM 9-1005-206-14P/3".
3-1	--------------------	1	Delete "CANNON, 37-MILLIMETER GUN, SUBCALIBER: M12 (interior type)".
	--------------------	5	Change "CANNON, 40-MILLIMETER DUAL AUTOMATIC GUN: M2 or M2A1; MOUNT, GUN: 40-mm, twin, M4 and M4E1" to "CANNON, 40-MILLIMETER DUAL AUTOMATIC GUN: M2A1; MOUNT, GUN: twin, 40-mm, M4E1".
	--------------------	13	Change "RIFLE, 57-MILLIMETER: M18, M18A1, or T15E16; MOUNT, GUN: M1917A2 or MOUNT, TRIPOD, WEAPON: M74" to "RIFLE, RECOILLESS, 57-MILLIMETER: M18, M18A1 or T15E16".
	--------------------	------	Add "ARMAMENT SUBSYSTEM, HELICOPTER, 40-MILLIMETER GRENADE LAUNCHER: M5 (LAUNCHER, GRENADE, 40-MILLIMETER: M75; MOUNT, GRENADE LAUNCHER (11014999)) (see page 3-15)".
3-2	--------------------	------	Mark page "deleted". (*Note.* Retain page 3-1.) Cannon is obsolete.
4-1	--------------------	16	Delete "GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51, w/e (CANNON: 75-mm automatic gun, M35 (T83E6 or T83E7); RECOIL MECHANISM: T47E2 or M29 (T47E3); MOUNT, GUN: 75-mm, AA, M84 (T69)------4-16".
	--------------------	19	Delete "GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-mm, M117, w/e (CANNON, 90-MILLIMETER GUN: M1A2 or M1A3; RECOIL MECHANISM: M1-series; MOUNT, GUN: 90-mm M1A2)------4-18".
	--------------------	21	Delete "GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-mm, M118, w/e (CANNON, 90-MILLIMETER GUN: M2A1 or M2A2, RECOIL MECHANISM: M17-series; FUZE, SETTER-RAMMER, M20; MOUNT, GUN: 90-mm, M2A1)------4-20".

Pages	Heading	Line	Action
4-1	--------------------	36	Change "MORTAR, 107-MILLIMETER: M30 (T104), w/e (CANNON, 107-MILLIMETER MORTAR: M30 (T104); MOUNT, MORTAR: 107-mm, M24 (T61), M24A1, or (ORD No. 8731738) (formerly 4.2-inch))" to "MORTAR, 4.2-INCH: (CANNON M30 on MOUNT M24 or M24A1) w/e".
	--------------------	39	Change "RIFLE, 75-MILLIMETER: M20 or T21E12; MOUNT, TRIPOD, WEAPON: M1917A2 or M74, w/e" to "RIFLE, RECOILLESS, 75-MILLIMETER: M20, w/e".
	--------------------	40	Change "RIFLE, 90-MILLIMETER: M67, w/e" to "RIFLE, RECOILLESS, 90-MILLIMETER: M67, w/e".
	--------------------	41	Change "RIFLE, 105-MILLIMETER: M27 or M27A1; MOUNT, RIFLE: 105-mm, M75 or M75A1, w/e" to "RIFLE, RECOILLESS, 105-MILLIMETER: M27 or M27A1; MOUNT, RIFLE: 105-mm, M75 or M75A1, w/e".
	--------------------	------	Add "MOUNT, GUN: SUBCALIBER, CAL. .50, M19 (see page 4-46)".
	--------------------	------	Add "HOWITZER, LIGHT, TOWED: 105-MM, M102 (CANNON, 105-MM HOWITZER: M137, RECOIL MECHANISM, 105-MM HOWITZER: M37; CARRIAGE, 105-MM, HOWITZER: M31) (see page 4-47)".
4-16 4-21	--------------------	------	Mark each page "deleted". (*Note.* Retain pages 4-15 and 4-22.) GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-MM WEAPONS SYSTEM, M51, 90-MM M117, and M118 are obsolete.
4-37	Title	------	Between "RIFLE" and "90-MILLIMETER", add "RECOILLESS" and wherever it appears on the page.
4-38	Title	------	Between "RIFLE" and "105-MILLIMETER", add "RECOILLESS" and wherever it appears on the page.
4-40	Title	------	Between "RIFLE" and "106-MILLIMETER", add "RECOILLESS" and wherever it appears on the page.
5-1	--------------------	------	Add "HOWITZER, MEDIUM, TOWED: AUXILIARY PROPELLED, 155-MM, M123A1, w/e (CANNON, 155-MILLIMETER HOWITZER: M1 or M1A1; RECOIL MECHANISM: M6-SERIES; CARRIAGE, 155-MILLIMETER HOWITZER: M32) (see page 5-10.1)"
	--------------------	13	Delete "GUN, FIELD ARTILLERY, TOWED: 155-mm, M59, w/e (CANNON, 155-MILLIMETER GUN: M2 or M2A1; RECOIL MECHANISM: M3-series; CARRIAGE, 155-MILLIMETER GUN: M1)------5-7".
5-10	CHARACTERISTICS	7	In line with "Length", change "113 ft, ⅛ in." to "113⅛ in.".
6-1	--------------------	4	Delete "GUN, HEAVY, MOTORIZED, 280-mm, M65, w/e (CANNON, 280-MILLIMETER GUN: M66 (T131); RECOIL MECHANISM: M32 (T80E3) AND T81 or M32 (T80E3) AND M33 (T18E1); CARRIAGE 280-MILLIMETER GUN: M30 (T72) ------6-4".
6-4 6-5	--------------------	------	Mark each page "deleted". (*Note.* Retain page 6-6.) Gun is obsolete.
8-1	--------------------	------	Add "ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN—2.75-INCH ROCKET LAUNCHER: XM16 (MACHINEGUN, 7.62-MILLIMETER: M60CA1; MOUNT, MACHINEGUN, 7.62-MM, HELICOPTER ARMAMENT SUBSYSTEM (7792569); LAUNCHER ROCKET: XM157 or XM158; MOUNT, ROCKET LAUNCHER, 2.75-INCH, HELICOPTER ARMAMENT SUBSYSTEM (11700100) (see page 8-3)".
12-1	--------------------	3, 4, 5	Delete "COMPUTER, GUN DIRECTION: M15 or M15C".
	--------------------	25	Delete "SCALE, GRAPHICAL FIRING: M44 and M44A1--12-21".
	--------------------	29	Delete "SCALE, GRAPHICAL FIRING: M50--12-26".
	--------------------	31	Delete "SCALE, GRAPHICAL FIRING: M57--12-28".

Pages	Heading	Line	Action
12-1	--------------------	34	Delete "SCALE, GRAPHICAL FIRING: M65..12-31".
12-6A	EQUIPMENT	------	Following "Basic Issue Items:" change "TM 9-1220-221-10/1" to "TM 9-1220-221-10".
	References	------	Change "TM 9-1220-221-10/1" to "TM 9-1220-221-10". Delete "TM 9-1220-221-10/2", and add "TM 9-1220-221-ESC, TM 9-1220-221-34/7".
12-17	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
12-18	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
12-19	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
12-23	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
12-25	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
12-26	--------------------	------	Mark page "deleted". (*Note.* Retain page 12-25.) M50 scale was obsoleted by AMCTC item 2472.
12-29	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-30	EQUIPMENT	------	Following "Basic Issue Items:" delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-31	--------------------	------	Mark page "deleted". (*Note.* Retain page 12-32.) M65 scale was obsoleted by AMCTC item 37413.
12-32	EQUIPMENT	------	Following "Basic Issue Items:" delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-33	EQUIPMENT	------	Following "Basic Issue Items:" delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
12-34	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-35	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-36	EQUIPMENT	------	Following "Basic Issue Items:" delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
	References	------	Delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
12-37	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
12-38	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
12-39	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-40	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Delete "None", and add "TM 9-1220-222-12P".
12-41	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-42	EQUIPMENT	------	Following "Basic Issue Items:" add "TM 9-1220-222-12P".
	References	------	Add "TM 9-1220-222-12P".
12-43	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-217-12P", and add "TM 9-1220-222-12P".

Pages	*Heading*	*Line*	*Action*
12-43	References	------	Delete "SNL F-351, TM 9-1220-217-12P", and add "TM 9-1220-222-12P".
12-45	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-217-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "SNL F-351, TM 9-1220-217-12P", and add "TM 9-1220-222-12P".
12-47	EQUIPMENT	------	Following "Basic Issue Items:" delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
	References	------	Delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
12-48	EQUIPMENT	------	Following "Basic Issue Items:" delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
	References	------	Delete "SM 9-5-1200", and add "TM 9-1220-222-12P".
12-52	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
12-53	EQUIPMENT	------	Following "Basic Issue Items:" delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
	References	------	Delete "TM 9-1220-216-12P", and add "TM 9-1220-222-12P".
13-1	--------------------	3	Delete "FIRE CONTROL SYSTEM FIELD ARTILLERY: M35 or M35C----13-29".
14-59	General	22	Delete "M48A2C", and add "M48A1".
		24	Following "M60" add "M60A1, and TANK, COMBAT, FULL TRACKED: 90-mm gun".
18-1	--------------------	2	After "M2" add "(T3)", and delete "M2A1".
18-2	--------------------	------	Add "POWER CONTROL: M3A1 (M3E1) (see page 18-77)".
19-1	--------------------	------	Add "ANTITANK GUIDED MISSILE SYSTEM: ENTAC (see page 19-145.1)".
	--------------------	4	Delete "ANTITANK GUIDED MISSILE SYSTEM—SS-10----19-123".
	--------------------	6	Delete "ARTILLERY GUIDED MISSILE SYSTEM—CORPORAL ----19-146".
	--------------------	7	Delete "ARTILLERY GUIDED MISSILE SYSTEM—LACROSSE ----19-183".
	--------------------	8	Delete "ARTILLERY GUIDED MISSILE SYSTEM—REDSTONE ----19-192".
19-123 19-133	--------------------	------	Mark each page "deleted". (*Note.* Retain page 19-134.) SS-10 Missile System was obsoleted by AMCTC item 2672.
19-146 19-182	--------------------	------	Mark each page "deleted". Corporal Missile System was obsoleted by AMCTC item 2178.
19-183 19-191	--------------------	------	Mark each page "deleted". Lacrosse Missile System was obsoleted by AMCTC item 1876.
19-192 19-220	--------------------	------	Mark each page "deleted". Redstone Missile System was obsoleted by AMCTC item 2179.
21-1	--------------------	3	Change to "CARRIER, COMMAND POST: light tracked, M577 and M577A1".
	--------------------	------	Add "TRUCK, PLATFORM, UTILITY: ½-ton, 4 x 4, M274, w/e (see page 21-9)".
	--------------------	------	Add "CHASSIS, TRUCK: 2½-ton, 6 x 6, M57 w/ and w/o winch (see page 21-24.1)".
21-11	Classification	------	Change "Standard B (OTCM 37119)" to "Standard C (AMCTC item 950)".
21-19	Classification	------	Change "Standard A (OTCM 37119)" to "Standard B (AMCTC item 1638)".
21-21	Classification	------	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC item 1638)".
21-23	Classification	1 and 2	Change "M46 w/wn—Standard B, (OTCM 36841) and M46C w/o wn—Standard A (OTCM 36876)" to Standard B (AMCTC item 1638)".

Pages	Heading	Line	Action
21-25	Classification	------	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC item 1638)".
21-55	Classification	1	Change "M35—Standard A (OTCM 36841)" to "M35—Standard B (AMCTC item 1638)".
21-57	Classification	------	Change "Standard A (OTCM 36937)" to "Standard B (AMCTC item 1638)."
21-61	Classification	------	Change "Standard B (OTCM 37119)" to "Standard C (AMCTC item 1099)".
21-69	Classification	------	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC item 1638)".
21-82A	Classification	------	Change "Standard" to "Standard B (AMCTC item 1638)".
21-82C	Classification	------	Change "Standard" to "Standard B (AMCTC item 1638)".
21-83	Classification	2	Change "M49C—Standard A (OTCM 37057)" to "Standard B (AMCTC item 1638)".
21-87	Classification	------	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC item 1638)".
21-89	Classification	------	Change "Standard B" to "Limited Standard (AMCTC item 1096)".
21-95	Classification	------	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC item 1638)".
21-113	Classification	1 and 2	Change "M292, w/e ---- Standard A (OTCM 36841)" and "M292, w/wn, w/e ---- standard" to "Standard B (AMCTC item 1638)".
21-114	Classification	2	Change "M109A1—Standard A (OTCM 36876)" to "M109A1—Standard B (AMCTC item 1638)".
21-120	Classification	------	Change "Standard A (OTCM 36841)" to "Standard B (AMCTC item 1638)".
22-1	--------------------	40	After "M131A1" delete "and M131A2, w/e", and add "M131A2, M131A3, and M131A3C; SEMITRAILER, TANK: fuel, 12-ton, 4-wheel, 5,000-gallon, M131A4 and M131A5; SEMITRAILER TANK: fuel servicing, 12-ton, 4-wheel, 5,000-gallon, M131A4C ----22-37".
22-2	--------------------	16	After "M146" delete "and M146C", and add "M146C and M146F ----22-50".
22-28	Classification	1	Change "M172—Standard B (OTCM 37119)" to "M172—Standard C (AMCTC item 1100)".
23-1	--------------------	9	Following "105-mm" add "M108 (T195E1) (see page 23-41)".
	--------------------	11	After "155-mm" delete "T196E1" and add "M109 (T196E1)".
	--------------------	19	Following "M60" add "and M60A1----23-32".
	--------------------	------	Add "FLAME THROWER, SELF-PROPELLED: M132 and M132A1 (see page 23-47)".
	--------------------	------	Add "VEHICLE, COMBAT ENGINEER, FULL TRACKED: 165-mm gun, M728 (T118E1) (see page 23-48)".
23-16	Classification	2	Change "M44A1 ---- Standard A (OTCM 36841)" to "M44A1 ---- Standard B (AMCTC item 1196)".
23-41	Title	------	Following "105-MM" add "M108 (T195E1)" and wherever "T195E1" appears on the page change to "M108".
29-1	--------------------	------	Add "SIMULATOR, SMALL ARMS FIRE: M2 (XM2) (see page 29-2.1)".
	--------------------	------	Add "TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, 10119920 (SIMULATOR, S-58) (see page 29-5)".
	--------------------	------	Add "TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, DX43 (ENTAC) (see page 29-6)".

4. Retain the transmittal sheet(s) in front of the manual for future reference.

*TM 9-500

TECHNICAL MANUAL
No. 9-500

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., *11, September 1962*

DATA SHEETS FOR ORDNANCE TYPE MATERIEL

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***This manual supersedes TM 9-236, 12 September 1960; TM 9-2200, 9 October 1956; and TM 9-2300, 3 May 1949 including C1, 31 October 1950.**

SECTION 1
INTRODUCTION

1. Purpose

This manual is a reference handbook published as an aid in planning, training, familiarization, and identification of Ordnance type materiel. It is not to be used as authorization for requisitioning, stockage, or issue of this materiel.

2. Scope

a. For each item of materiel, there is an illustration and description together with characteristics and related data. Included in the related data are Federal stock number, kind of item (major or secondary) and type classification with Ordnance Technical Committee Meeting (OTCM) or U. S. Army Materiel Command Technical Committee Meeting (AMCTCM) reference.

b. Actual weights, dimensions, etc., for storage and shipment data, may vary somewhat from the average or representative values shown. For official purposes, the corresponding values published in the specific SM 9-5-series should be used.

c. Information concerning supply, operation, and maintenance of the items will be found in the publications referenced for those items. A complete listing of these publications is maintained in DA Pam 310-series indexes (app. I).

d. Within the manual, items of materiel except large rocket and guided missile systems are grouped by classes, one section being devoted to each class. Within each class, the arrangement is alphabetical. In the case of large rocket and guided missile systems, all classes for the systems are grouped in one section. Within each system the components are listed alphabetical.

e. Space has been left for data not available at the time of publication. As these data become available, they will be added by changes.

f. The appendix contains a list of current references, including forms and other available publications applicable to this publication.

g. Any errors or omissions will be forwarded on DA Form 2028 direct to the Commanding Officer, Raritan Arsenal, ATTN: SSMRA-PRA, Metuchen, N. J

SECTION 2

GUNS, THROUGH 30-MM

(CLASS 1005)

(Includes bayonets, bayonet-knives, carbines ammunition chests, water chests, coupler and disconnectors, automatic guns, trench knives, grenade launchers, linker-delinkers, link-delinking machines, repositioning machines, machineguns, tripod mounts, commander's cupola mounts, automatic pistols, revolvers, rifles, repositioners, shotguns, and submachineguns.)

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ARMAMENT SUBSYSTEM, HELICOPTER, .30 CALIBER MACHINEGUN: TWIN, XM1 (MACHINEGUN, CALIBER .30: M37C, FIXED; MOUNT, MACHINEGUN: CAL. .30/7.62MM, HELICOPTER [ORD. NO. 8428015]) AND ARMAMENT SUBSYSTEM, HELICOPTER, .30 CALIBER MACHINEGUN: TWIN, XM1E1 (MACHINEGUN, CALIBER .30: M37C, FIXED: MOUNT, MACHINEGUN: CAL. .30/7.62MM, HELICOPTER [ORD. NO. 8427702]) (See page 2-81)
ARMAMENT SUBSYSTEM, HELICOPTER, 7.62 MILLIMETER MACHINEGUN: TWIN, XM2 (MACHINEGUN, 7.62 MILLIMETER: M60C; MOUNT, MACHINEGUN: 7.62-MM, HELICOPTER [ORD. NO. 8421961]) (See page 2-83)
ARMAMENT SUBSYSTEM, HELICOPTER, 7.62 MILLIMETER MACHINEGUN: QUAD, XM6, XM6E1 and XM6E3 (MACHINEGUN 7.62 MILLIMETER: M60; MOUNT, MACHINEGUN: 7.62-MM, HELICOPTER [ORD NO. 7792569]) (See page 2-84)
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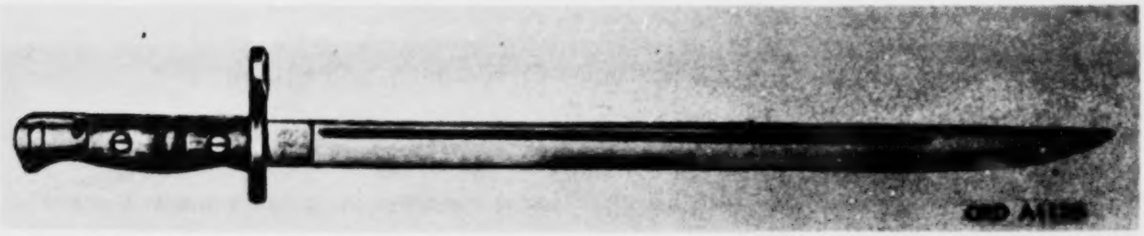
BAYONET: M1917



Model	*Line item No.*	*Federal stock No.*
M1917	4-01090-05	1005-716-2787

General

BAYONET: M1917 is issued to troops armed with riot-type shotguns having a bayonet attachment. The bayonet M1917 is attached to the bayonet attachment and is used for guard duty. SCABBARD, BAYONET: M1917,* is used with this bayonet.

Differences among models

Data plate location

Data are stamped on the rear face of the blade guard.

Classification: Limited standard (OTCM 37119).

CHARACTERISTICS

Weight	1 lb, 2 oz
Length overall	1 ft, 9 13/16 in.
Length of blade	1 ft, 5 in.
Width of blade	0.932 in.

EQUIPMENT

Basic Issue Items:

* For characteristics and data, see item in section 9.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 80 bayonets per wood box (VCI pack).

Length	3 ft.
Width	2 ft. ⅝ in.
Height	1 ft. 5½ in.
Volume	9.0 cu ft
Gross weight	100 lb
Ship tons	0.23

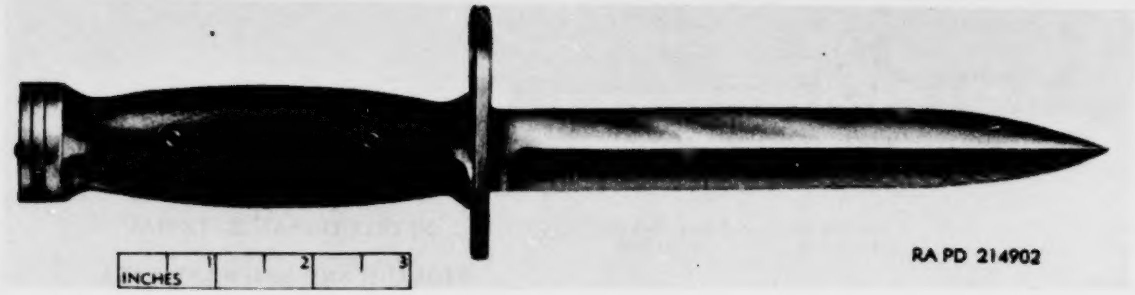
Outside Continental United States

Shipped 36 bayonets per wood box (VCI pack).

Length	2 ft ⅝ in.
Width	1 ft 8 in.
Height	1 ft. 1½ in.
Volume	3.9 cu ft
Gross weight	75 lb
Ship tons	0.10

References: FM 23-25; TM 9-2205, TM 9-1005-206-14/P2.

BAYONET-KNIFE: M4



RA PD 214902

Model	*Line item No.*	*Federal stock No.*
M4	4-01076-10	1005-716-0944

General

BAYONET-KNIFE: M4 is issued to all troops armed with the carbine. It is attached to the muzzle end of the carbine or it can be used as a hand weapon. SCABBARD, BAYONET-KNIFE: M8A1,* is used with this bayonet-knife.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	9 oz
Length overall	11¾ in.
Length of blade	6¾ in.
Width of blade	⅞ in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 bayonet-knives per shipping container.

Length	2 ft, 4 in.
Width	1 ft, 5½ in.
Height	1 ft, 1¾ in.
Volume	4.05 cu ft
Gross weight	122 lb
Ship tons	0.11

Outside Continental United States

Shipped 100 bayonet-knives per shipping container.

Length	2 ft, 4 in.
Width	1 ft, 5½ in.
Height	1 ft, 1¾ in.
Volume	4.05 cu ft
Gross weight	122 lb
Ship tons	0.11

References: TM 9-1005-237-14P, TM 9-2205, FM 23-25.

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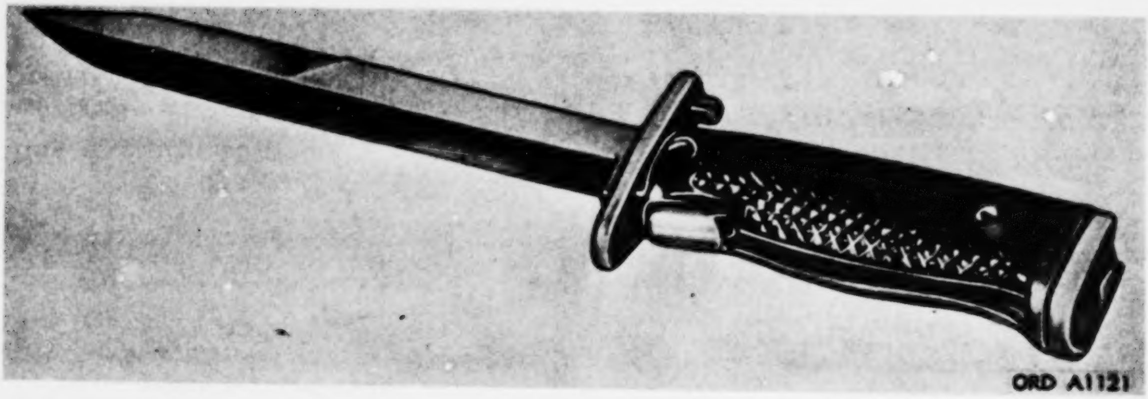
* For characteristics and data, see item in section 9.

BAYONET-KNIFE: M5 AND M5A1



Model	*Line item No.*	*Federal stock No.*
M5	4-01086-20	1005-726-6556
M5A1	4-01086-50	1005-336-6568

General

BAYONET-KNIFE: M5 or M5A1 is for use with RIFLE, CALIBER .30: U.S., M1, M1C (Sniper's), and M1D (Sniper's) as a bayonet in close combat, guarding of prisoners, riot duty, etc. A secondary function of the item is for use as a general utility knife. The blade has a cutting edge for the full length of bottom edge and for 3½ inches to rear of its point along upper edge. The handle is knurled to allow a firm grip and fits comfortably in the hand. There is no blood groove. SCABBARD, BAYONET-KNIFE: M8A1,* is used with this bayonet-knife.

Differences among models

The bayonet-knife M5A1 differs from the M5 in that the M5A1 has an improved latching lever, internal part in grip, thus increasing the accuracy of the weapon.

Data plate location

Data are stamped on guard of bayonet-knife.

Classification:		
	M5	Limited standard (OTCM 37119)
	M5A1	Standard B (OTCM 36841)

* For characteristics and data, see item in section 9.

CHARACTERISTICS

Weight	11½ oz
Length overall	11½ in.
Length of blade	6¾ in.
Width of blade	⅞ in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 bayonet-knives per wood box (VCI pack).

Length	3 ft, ½ in.
Width	1 ft, 2¼ in.
Height	1 ft, 4 in.
Volume	4.8 cu ft
Gross weight	184 lb
Ship tons	0.12

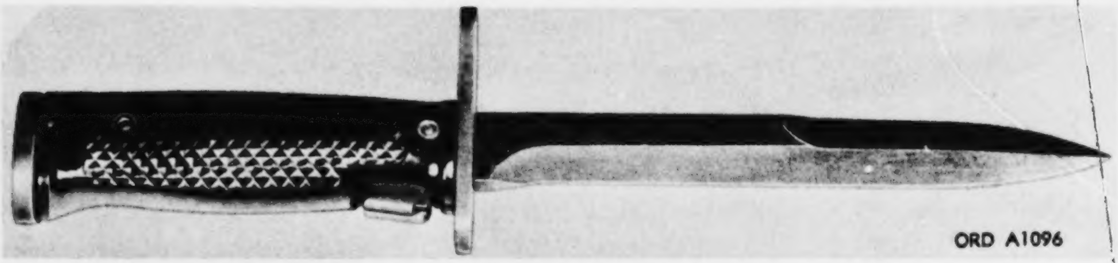
Outside Continental United States

Shipped 50 bayonet-knives per wood box (VCI pack).

Length	1 ft, 7⅝ in.
Width	1 ft, 2¼ in.
Height	1 ft, 4 in.
Volume	2.6 cu ft
Gross weight	70 lb
Ship tons	0.06

References: TM 9-1005-237-14P, TM 9-2205, FM 23-25, TM 9-2023-1.

BAYONET-KNIFE: M6 (T12)


ORD A1096

Model	*Line item No.*	*Federal stock No.*
M6	4-01088-01	1005-722-3097

General

BAYONET-KNIFE: M6 is a combination utility knife and bayonet. It is used with the RIFLE, 7.62-MILLIMETER: M14 as a bayonet for close combat, guard duty, riot duty, etc. The blade has a cutting edge for the full length on the bottom and for 3½ inches to the rear of the point on the top edge. The blade has no blood groove. The handle has knurled surfaces for a firm grip. SCABBARD, BAYONET-KNIFE: M8A1.* is used with this bayonet-knife.

Differences among models

Data plate location

Classification: Standard A (OTCM 37269).

CHARACTERISTICS

Weight	12 oz
Length overall	11¼ in.
Blade:	
Length	6⅝ in.
Width	⅞ in.

* For characteristics and data, see item in section 9.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 bayonet-knives per wood box (VCI pack).

Length	3 ft, ½ in.
Width	1 ft, 2½ in.
Height	1 ft, 4 in.
Volume	4.8 cu ft
Gross weight	135 lb
Ship tons	0.12

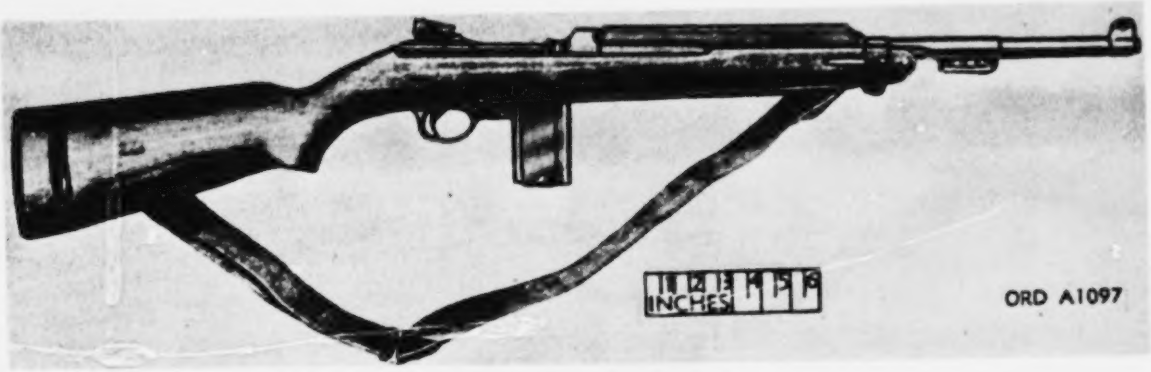
Outside Continental United States

Shipped 50 bayonet-knives per wood box (VCI pack).

Length	1 ft, 7⅝ in.
Width	1 ft, 2½ in.
Height	1 ft, 4 in.
Volume	2.6 cu ft
Gross weight	70 lb
Ship tons	0.06

References: TM 9-2205, TM 9-1005-237-14P, FM 23-25.

CARBINE, CALIBER .30: M1



ORD A1097

Model	*Major item* *Line item No.*	*Federal stock No.*
M1 w/e and spare parts	4–03996–00	1005–670–7670

General

CARBINE, CALIBER .30: M1 is a gas-operated, self-loading, magazine-fed semiautomatic, lightweight, offensive or defensive shoulder weapon. Carbines originally were furnished with an L-type rear sight. A modification provides for a rear sight, adjustable for both elevation and windage. The front band has been modified to provide for attaching the BAYONET-KNIFE: M4.

Differences among models

Data plate location

Data are stamped on top of receiver behind rear sight.

Classification: Standard C (OTCM 37119).

CHARACTERISTICS

Weight (w/15-round magazine (unloaded))	5 lb, 8 oz
Weight (w/15-round magazine (loaded) and sling)	6 lb, 2 oz
Weight of 15-round magazine (unloaded)	3 oz
Weight of 15-round magazine (loaded)	9 oz
Length overall	2 ft, 11⅗ in.
Length overall w/bayonet attached	3 ft, 6⅛ in.
Operation	gas
Feed	magazine
Capacity of feeding device	15 rd
Cooling	air

AMMUNITION

Types .... ball, tracer, and dummy

PERFORMANCE

Muzzle velocity (ball)	1,970 fps
Maximum range (ball) (30° elevation)	2,200 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B–28.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .30 CARBINE, DUMMY: M13.
TRAINER, RIFLE, SIGHTING: device, M15.

STORAGE AND SHIPMENT DATA

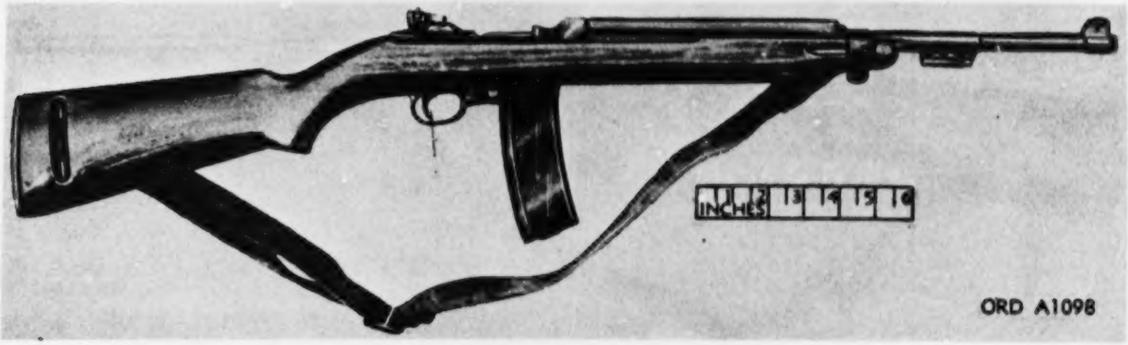
Within and Outside Continental United States

Shipped 10 carbines per wood box (VCI pack).

Length	3 ft, 5⅝ in
Width	1 ft, 6½ in
Height	11⅝ in.
Volume	5.3 cu ft
Gross weight	113 lb
Ship tons	0.13

References: SNL B–28; FM 23–7; TM 9–1276; TM 9–2205.

CARBINE, CALIBER .30: M2



ORD A1098

	Major item	
Model	***Line item No.***	***Federal stock No.***
M2 w/e and spare parts	4-03994-00	1005-670-7675

General

CARBINE, CALIBER .30: M2 is a gas-operated, magazine-fed, lightweight, offensive or defensive shoulder weapon. It is capable of firing ammunition either in single shots or automatically. When firing single shots, it is a semiautomatic weapon. Automatic fire is achieved by means of a selector, located on the top left side of the receiver, which is manually controlled by the operator. Its rear sight is adjustable for both elevation and windage. The front band permits the attaching of BAYONET-KNIFE: M4.

Differences among models

Data plate location

Data are stamped on right-hand side of receiver.

Classification: Standard C (OTCM 37119).

CHARACTERISTICS

Weight:	
(w/15-round magazine (unloaded)	5 lb, 8 oz
(w/15-round magazine (loaded) and sling)	6 lb, 1⅜ oz
(w/30-round magazine (unloaded))	5 lb, 8½ oz
(w/30-round magazine (loaded))	6 lb, 9 oz
15-round magazine (unloaded)	3 oz
15-round magazine (loaded)	9 oz
30-round magazine (unloaded)	3½ oz
30-round magazine (loaded)	1 lb, 1 oz
Length:	
Overall	2 ft, 11½ in.
Overall w/bayonet attached	3 ft, 6¼ in.

Operation	gas
Feed	magazine
Capacity of feeding device:	
Old type	15 rd
New type	30 rd
Cooling	air

AMMUNITION

Types	ball, tracer, and dummy

PERFORMANCE

Muzzle velocity (ball)	1,970 fps
Maximum range (ball) (30° elevation)	2,200 yd
Rate of fire (full automatic)	750-775 rd per min

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-28.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .30 CARBINE, DUMMY: M13.
TRAINER, RIFLE, SIGHTING: device, M15.
For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

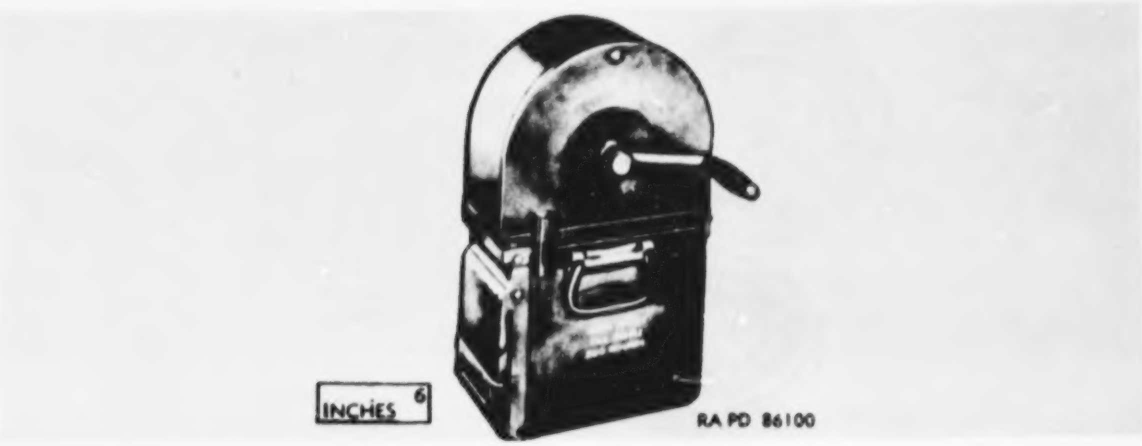
Within and Outside Continental United States

Shipped 10 carbines per wood box (VCI pack).

Length	3 ft, 5¾ in.
Width	1 ft, 6½ in.
Height	11¾ in.
Volume	5.3 cu ft
Gross weight	113 lb
Ship tons	0.13

References: SNL B-28; FM 23-7; TM 9-1276; TM 9-2205.

CHEST, AMMUNITION, CALIBER .50, M2



RA PD 86100

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M2		1005-652-8399

General

CHEST, ammunition, caliber .50, M2 provides a convenient means of handling and feeding belted ammunition. A crank is provided for use in loading the chest. The chest is made of steel and equipped with a hinge, so that the upper half may be swung back for purposes of filling and cleaning. When in use, the chest attaches to the pertinent mount by means of slots on the side of the chest. The chest is mounted on the early models of the MOUNT, GUN: trailer, multiple caliber .50 machinegun, M55 which mounts MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, turret type and MOUNT, GUN: multiple caliber .50, M45C and on MOUNT, GUN: twin, caliber .50 machinegun, M65 which mounts MACHINEGUN, CALIBER .50: M2, heavy barrel, flexible or MACHINEGUN, CALIBER .50: Browning AN-M2, aircraft, basic. However, on the newer models of the M45C mount, this chest is being replaced by an ammunition box tray.

Differences among models

Data plate location

Data are located on side of chest.

Classification:

CHARACTERISTICS

Weight	32 lb
Length	8 in.
Width	$12\frac{21}{32}$ in.
Height	1 ft, $8\frac{5}{8}$ in.
Operation	spring
Capacity	200 rd

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 3 chests per shipping container.

Length	2 ft, $5\frac{1}{4}$ in.
Width	1 ft, $10\frac{1}{2}$ in.
Height	1 ft, 2 in.
Volume	5.3 cu ft
Gross weight	130 lb
Ship tons	0.13

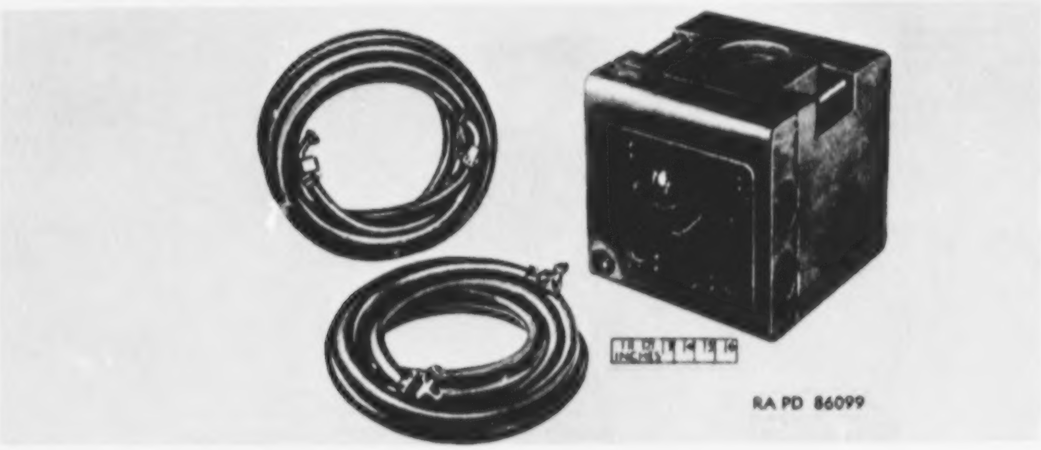
Outside Continental United States

Shipped 3 chests per shipping container.

Length	2 ft, $5\frac{1}{4}$ in.
Width	1 ft, $10\frac{1}{2}$ in.
Height	1 ft, 2 in.
Volume	5.3 cu ft
Gross weight	130 lb
Ship tons	0.13

References: SNL A-55, Sec. 33; SNL A-59; TM 9-230; TM 9-2010; TM 9-2205.

CHEST, WATER, CALIBER .50, M3 (COMPLETE W/HOSE ASSEMBLY)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M3		

General

CHEST, water, caliber .50, M3 consists of a hand-operated, chain-driven rotor pump mounted in a steel chest with the necessary hose and connections. The pump is operated while firing, causing circulation of water in the water jacket, thereby keeping the gun barrel cool.

Differences among models

Data plate location

Classification: Limited standard.

CHARACTERISTICS

Weight:	
Complete w/o water	74 lb, 8 oz
Complete w/water	139 lb, 8 oz
Two hose assemblies	13 lb, 8 oz
Length	1 ft, 3 15/16 in.
Width	1 ft, 2⅝ in.
Height	1 ft, 2⅛ in.
Capacity	8 gal
Displacement	3,055 cu in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

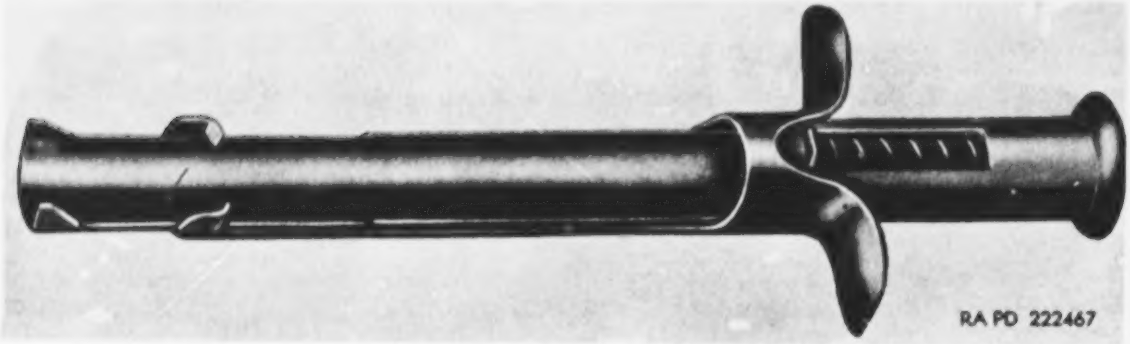
Shipped chests per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped chests per
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-2021.

COUPLER AND DISCONNECTOR, LINK BELT, CALIBER .50, M20


RA PD 222467

Secondary item

Model	*Line item No.*	*Federal stock No.*
M20		1005-714-6365

General

COUPLER AND DISCONNECTOR, link belt, caliber .50, M20 is a lightweight steel tool of simple construction requiring no adjustment in the performance of both coupling and disconnecting of caliber .50 machinegun cartridge belts. The tool has an outside tube with finger grips and an inside tube plunger and retracting spring. It functions like a hypodermic syringe and couples belts by pulling the end link loops onto the inserted cartridge, or disconnects a belt by holding the link loops while the round is simultaneously extracted to separate the belt at that point.

Differences among models

Data plate location

Classification: Standard A.

CHARACTERISTICS

Weight ....
Length ....(approx.) 10⅛ in.
Width (across finger grips) ....3½ in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

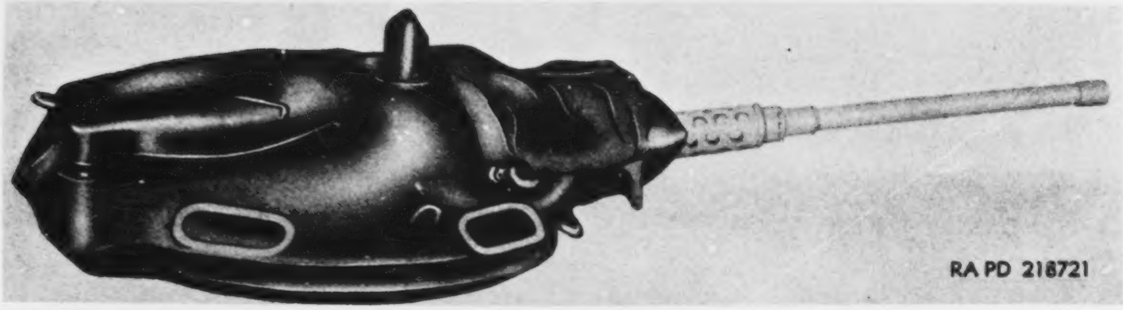
Shipped coupler and disconnectors per wood box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped coupler and disconnectors per wood box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL A-38, TM 9-2021.

CUPOLA, TANK COMMANDER'S: CALIBER .50 MACHINEGUN, M1



Secondary item

Model	*Line item No.*	*Federal stock No.*
M1		1005-399-6784

General

CUPOLA, TANK COMMANDER'S: caliber .50 machinegun, M1 is a turret-type rotatable dome installed on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1, M48A2, and M48A2C, and TANK, COMBAT, FULL TRACKED: flamethrower, M67A1, to provide the commander with reasonable armor protection, close-in defensive firepower, and target observation by permanently installed direct vision prism blocks or a periscope sight. It provides support for MACHINEGUN, CALIBER .50: Browning, M2, turret type, and means for its loading, charging, firing, and positioning in azimuth and elevation.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Height:

Without sight	1 ft, $2\frac{7}{8}$ in.
From cupola datum line	1 ft, $1\frac{15}{16}$ in.
Using adapter ring kit w/o sight	1 ft, $4\frac{7}{16}$ in.
Width or diameter	3 ft, $2\frac{5}{8}$ in.
Width or diameter, using adapter ring kit	3 ft, 5 in.
Length (w/o machinegun)	4 ft, $1\frac{3}{16}$ in.
Weight	1,400 lb
Weight, using adapter ring kit	1,670 lb
Operation	manual, w/electrical firing switch for machinegun
Power required	24-v, dc (for firing only)

PERFORMANCE

Azimuth	360°
Maximum elevation	60°
Maximum depression	10°

EQUIPMENT

Sighting and Fire Control:*

Sight, periscope, M28 (for M48A1, M48A2 tank and M67A1 flame thrower tank).

Mount, periscope, M104A1 (T195E1) (for M48A1, M48A2 tank and M67A1 flame thrower tank).

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped cupola per

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped cupola per

Length

Width

Height

Volume

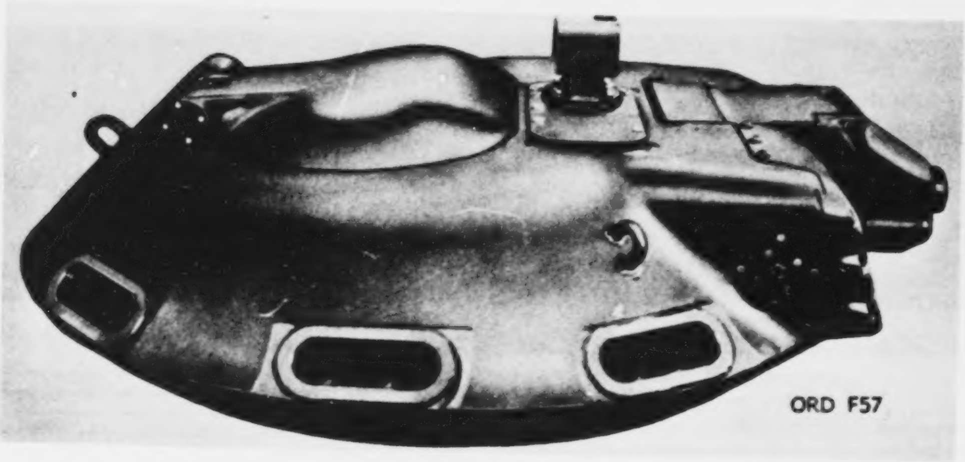
Gross weight

Ship tons

References: TM 9-1005-219-35, TM 9-1005-219-35P.

* For characteristics and data, see items in section 14.

CUPOLA, TANK COMMANDER'S: CALIBER .50 MACHINEGUN, M19 (T9)



Model	*Secondary item* *Line item No.*	*Federal stock No.*
M19		

General

CUPOLA, TANK COMMANDER'S: caliber .50 machinegun, M19(T9) is installed on TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. It is a self-contained unit mounting MACHINEGUN, CALIBER .50: M85 with required controls to sight, lay, and fire the machinegun in azimuth and elevation. The cupola has eight vision blocks and an electrical slipring for operating the lights and commander's communication system. The weapon is traversed, elevated, and depressed entirely by mechanical controls. It can be fired either electrically or manually. The cupola provides protection for the commander from direct fire or overhead burst and enables the machinegun to be operated under cover.

Differences among models

Data plate location

Classification: Standard A (OCTM 37282).

CHARACTERISTICS

Weight	1,930 lb
Weight (w/machinegun and ammunition)	2,028 lb
Length:	
w/o machinegun	5 ft, $3\frac{1}{2}$ in.
w/machinegun	7 ft, $11\frac{15}{16}$ in.
Width or diameter	4 ft, $5\frac{1}{8}$ in.
Height w/o periscope guard (from turret mounting surface)	1 ft, $6\frac{1}{2}$ in.
Azimuth	
Elevation (machinegun)	+60°
Depression (machinegun)	−15°
Operation	manual
Power requirements	24-volt, dc
Maximum swing radius:	
Including machinegun	5 ft, $5\frac{5}{16}$ in.
Excluding machinegun	2 ft, 9 in.
Height w/periscope guard (from turret mounting surface)	1 ft, $8\frac{19}{32}$ in.

EQUIPMENT

Sighting and Fire Control:*
Sight, Periscope, M28C
Mount, Periscope, M104A2

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped mounts per
Length
Width
Height
Volume
Gross weight
Ship tons

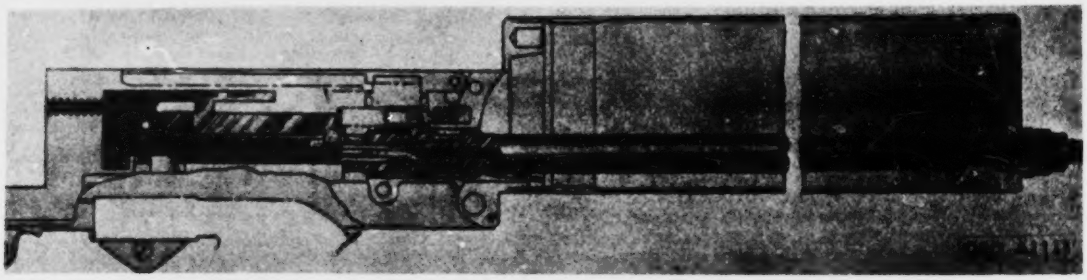
Outside Continental United States

Shipped mounts per
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9–1000–218–35, TM 9–1000–218–35P.

* For characteristics and data, see item in section 14.

GUN, CALIBER .22, SUBCALIBER: M3



Major item

Model	*Line item No.*	*Federal stock No.*
M3, w/e	4-57925-10	1005-678-7369

General

GUN, CALIBER .22, SUBCALIBER: M3 (formerly known as RIFLE or TRAINER) is a link-belt fed, recoil-operated, automatic, water-cooled machinegun. This rifle is designed for the purpose of firing the caliber .22 cartridge in MACHINEGUN, CALIBER .30: Browning, M1917A1, for training purposes. The conversion is accomplished merely by changing the main group assemblies. The operation of the machinegun when converted to the subcaliber rifle is identical to the operation of the M1917A1 machinegun in every respect.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight:	
W/o water	32 lb
W/water	39 lb
Conversion parts	6 lb, 8 oz
Length overall	3 ft, 2⅝ in.
Type of mechanism	short recoil, floating chamber
Feed	disintegrating metallic link belt
Cooling	water

AMMUNITION

Type	ball (long rifle, 40-grain bullet)

PERFORMANCE

Muzzle velocity (average)	1,130 fps
Maximum range (30° elevation)	1,500 yd
Rate of fire	450-600 rd per min

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 rifles per wood box.

Length	2 ft, 1¾ in.
Width	1 ft
Height	1 ft, 7⅛ in.
Volume	3.4 cu ft
Gross weight	120 lb
Ship tons	0.085

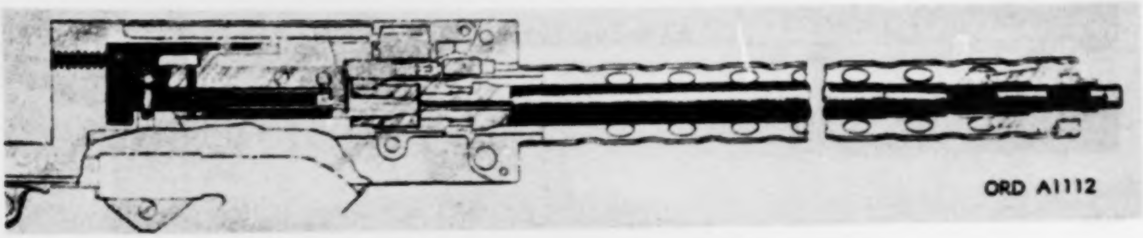
Outside Continental United States

Shipped rifles per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-48, Sec. 7; TM 9-2205.

GUN, CALIBER .22, SUBCALIBER: M4


ORD A1112

Model	*Line item No.*	*Federal stock No.*
M4, w/e	4-57925-20	1005-478-7370

Major item

General

GUN, CALIBER .22, SUBCALIBER: M4 (formerly known as RIFLE or TRAINER) is a link-belt fed, recoil-operated, automatic, air-cooled machinegun designed for the purpose of firing the caliber .22 cartridge in MACHINEGUN, CALIBER .30: Browning, M1919A4 flexible, for training purposes. The complete unit consists of a group of components so designed that the M1919A4 machinegun may be converted to fire the caliber .22 cartridges merely by changing the main group assemblies. The operation of the machinegun when converted to the subcaliber rifle is identical to the operation of the M1919A4 machinegun in every respect.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	32 lb
Weight of conversion parts	7 lb
Length overall	3 ft, 5⅛ in.
Length of barrel	22⅝ in.
Type of mechanism	short recoil, floating chamber
Feed	metallic link belt
Cooling	air

AMMUNITION

Type	ball (long rifle, 40-grain bullet)

PERFORMANCE

Muzzle velocity (average)	1,130 fps
Maximum range (30° elevation)	1,500 yd
Rate of fire	400–550 rd per min

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A–48.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 rifles per wood box.

Length	2 ft, 8⅛ in.
Width	1 ft, 7 in.
Height	2 ft
Volume	7.2 cu ft
Gross weight	265 lb
Ship tons	18

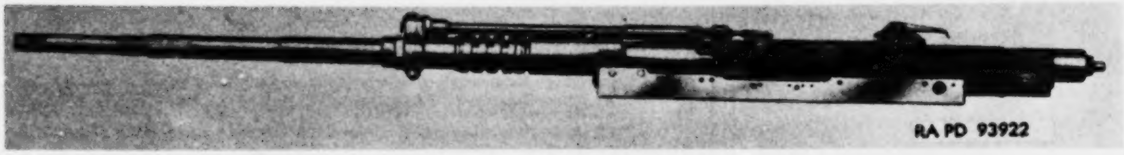
Outside Continental United States

Shipped rifles per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A–48, Sec. 7; TM 9–2205.

GUN, 20-MILLIMETER, AUTOMATIC: M3



Model	*Line item No.*	*Federal stock No.*
M3		1005-672-4911

General

GUN, 20-MILLIMETER, AUTOMATIC: M3 is an air-cooled, combination blowback and gas-operated, link-belt fed gun designed to fire percussion primed ammunition. The metallic link belt is used to feed the ammunition into the weapon. By repositioning some of the component parts or changing of feed mechanisms, ammunition may be fed into the gun from either right or left as desired. These weapons are mounted fixed in the wing or fuselage of the aircraft or is flexible mounts in the turret.

Differences among models

Data plate location

Classification: Standard (for U.S. Navy use only) (OTCM 37429).

CHARACTERISTICS

Weight:	
Gun, including cradle	99.5 lb
Tube	26.2 lb
Length:	
Overall	6 ft, 5$\frac{11}{16}$ in.
Tube	4 ft, 4½ in.
Rifling:	
Length	48.06 in.
Number of grooves	9
Twist, uniform right-hand slope	7°
Operation	combination blowback and gas-operated
Feed	disintegrating metallic link belt
Cooling	air

AMMUNITION

Types	AP-T, HEI, HE-T, incendiary, TP, and dummy
Links	M7, M8 (M7E4), M10 (M8E1), M4 (end), M6 (end), and 20-mm cartridge link filler

PERFORMANCE

Muzzle velocity:	
AP-T	2,730 fps
HEI	2,730 fps
Maximum range:	
AP-T	5,900 yd
HEI	5,750 yd
Rate of fire	650-800 rd per min

EQUIPMENT

Sighting and Fire Control:

Sights are considered to be plane equipment and furnished by the Air Force.

Basic Issue Items:

INSTRUCTIONAL MATERIAL

CARTRIDGE, 20-MILLIMETER DUMMY: M18A3.

STORAGE AND SHIPMENT DATA

Outside and Within Continental United States

Shipped 1 gun per wood box (VCI pack).

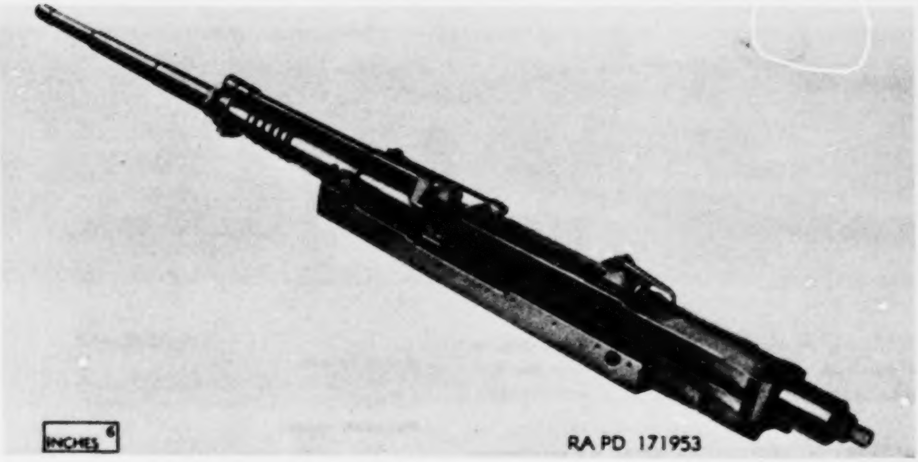
Length	7 ft, 1¼ in.
Width	11½ in.
Height	9½ in.

Within and Outside Continental United States

Volume	5.4 cu ft
Gross weight	170 lb
Ship tons	0.13

References:

GUN, 20-MILLIMETER, AUTOMATIC: M24A1



RA PD 171953

Model	*Major item* *Line item No.*	*Federal stock No.*
M24A1		1005-723-8297

General

GUN, 20-MILLIMETER, AUTOMATIC: M24A1 is an air-cooled, combination blowback and gas-operated, link-belt fed gun designed to fire electric primed fixed ammunition. The metallic link belt is used to feed the ammunition into the weapon. By repositioning some of the component parts or changing of feed mechanisms, ammunition may be fed into the gun from either right or left as desired. The weapon is mounted fixed in the wing or fuselage of the aircraft or in a flexible mount in the turret.

Differences among models

Data plate location

Classification: Standard (for U.S. Air Force use only) (OTCM 37429).

CHARACTERISTICS

Weight:	
Gun, including cradle	100 lb
Cradle assembly	9 lb
Tube	26.2 lb
Length:	
Overall	6 ft, 5$\frac{11}{16}$ in.
Tube	4 ft, 4½ in.
Length of tube	4 ft, 4½ in.
Rifling:	
Length	48.06 in.
Number of grooves	9
Twist, uniform right-hand slope	7 deg
Operation	combination blowback and gas-operated
Feed	disintegrating metallic link belt
Cooling	air

AMMUNITION

Types	AP-T, API, AP, HEI, incendiary, TP and dummy
Links	M10 (M8E1) and 20-mm cartridge link filler

PERFORMANCE

Muzzle velocity:	
AP-T	2,780 fps
HEI	2,780 fps
Maximum range:	
AP-T	5,900 yd
HEI	5,750 yd
Rate of fire	750-800 rd per min

EQUIPMENT

Sighting and Fire Control:

Sights are considered to be plane equipment and furnished by the Air Force.

Basic Issue Item:

INSTRUCTIONAL MATERIAL

CARTRIDGE, 20-MILLIMETER DUMMY: M18A3.

STORAGE AND SHIPMENT DATA

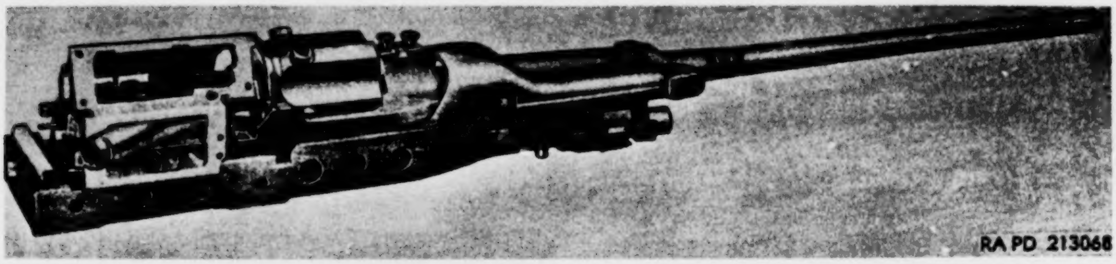
Within and Outside Continental United States

Shipped 1 gun per wood box.

Length	7 ft, 1¾ in.
Width	11½ in.
Height	9½ in.
Volume	5.4 cu ft
Gross weight	170 lb
Ship tons	0.13

References: TO 11W1-12-2-92, TO 11W1-12-2-93, TO 11W1-12-2-94.

GUN, 20-MILLIMETER, AUTOMATIC: M39A2


RA PD 213068

Model	*Line item No.*	*Federal stock No.*
M39A2 (right side feed)		1005-566-0044
M39A2 (left side feed)		1005-566-0045

General

GUN, 20-MILLIMETER, AUTOMATIC: M39A2 is a gas-operated, revolver-type automatic gun which fires electric primed ammunition from a metallic linked belt. Ammunition may be fed into the gun from either the right or left side. The weapon is distinguished by a 5-chamber drum which revolves about an axis, parallel to the gun bore. The gun fires the 20-mm cartridge at the index drum position of the 6 o'clock chamber. It is used by the Air Force for fixed type mountings in aircraft.

Differences among models

Data plate location

Classification: Limited Standard (for U.S. Air Force use only) (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun	179 lb
Weight:	
Tube	29.6 lb
Length:	
Overall	6 ft, ⅛ in.
Length:	
Tube	4 ft, 5⅛ in.
Rifling:	
Length	53.6 in.
Number of grooves	9
Twist, gain right-hand	one turn in 20 in.
Operation	gas operated
Feed	disintegrating metallic link belt
Cooling	air

AMMUNITION

Types	ball, API, HEI, TP, and dummy
Links	T61E2 and T61E3

PERFORMANCE

Muzzle velocity:	
API	3,300 fps
HEI	3,300 fps
Maximum range:	
API	
HEI	5,750 yd
Rate of fire	

EQUIPMENT

Sighting and Fire Control:

Sights are considered to be plane equipment and are furnished by the Air Force.

Basic Issue Items:

INSTRUCTIONAL MATERIAL

CARTRIDGE, 20-MILLIMETER DUMMY: M51E6, M51E8, or M51.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 gun per wood box.

Length	4 ft, 9⅝ in.
Width	1 ft, 2⅛ in.
Height	1 ft, 1⅜ in.
Volume	6.4 cu ft
Gross weight	240 lb
Ship tons	0.16

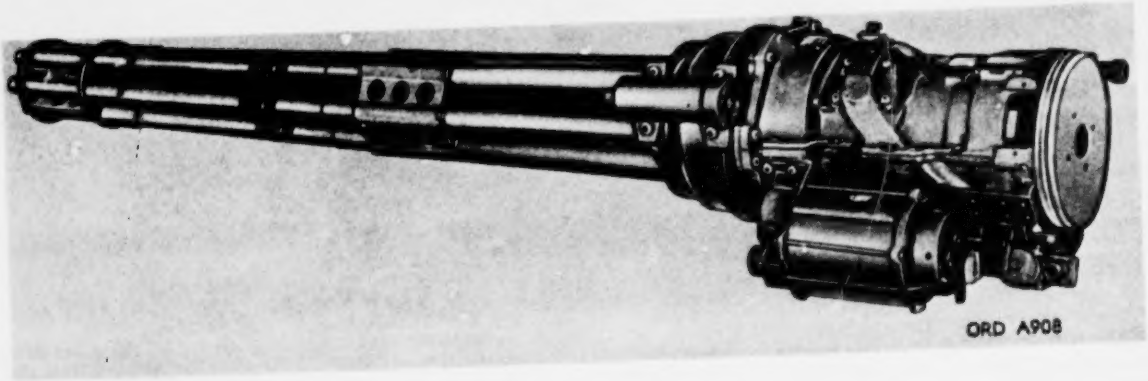
Outside Continental United States

Shipped gun per wood box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TO 11W1-12-3-14, TO 11W1-12-3-22

GUN, 20-MILLIMETER, AUTOMATIC: M61 (T171E3)


ORD A908

Model	*Line item No.*	*Federal stock No.*
M61		1005-520-2620

General

GUN, 20-MILLIMETER, AUTOMATIC: M61 (T171E3) is a 6-barrel, rotating type weapon, designed on the Gatling principle to fire electric primed ammunition at a very high rate. It is operated externally by a nonintegral electrical or hydraulical power drive, and linked ammunition is fed into the gun by a sprocket type feeder. The weapon is used by the Air Force as a fixed- and turret-type weapon mounted in aircraft.

Differences among models

Data plate location

Classification: Standard (for U.S. Air Force use only) (OTCM 37824).

CHARACTERISTICS

Weight of gun w/M2A1 feeder and	304 lb
w/M7 drive	305 lb
w/M12 drive	
Weight of gun w/M3A1 feeder and	302 lb
w/M7 drive	304 lb
w/M12 drive	
Length overall, w/M2A1 or M3A1 feeder and	6 ft, ⅝ in.
w/M7 drive	6 ft, 4⅝ in.
w/M12 drive	18 lb
Weight of barrel	5 ft
Length of barrel	
Rotation of barrels	counterclockwise viewed from breech end
Rifling:	
Length	
Number of grooves	9
Twist, gain right-hand	one turn in 20 in.
Operation	electric (M7 drive) or hydraulic (M12 drive)
Feed	disintegrating metallic link belt
Cooling	air

AMMUNITION

Types	ball, API, HEI, TP, and dummy
Links	M14 (for M2A1 feeder); M17 (T99) (for M3A1 feeder)

PERFORMANCE

Muzzle velocity:	3,430 fps
API	3,430 fps
HEI	
Maximum range:	
API	
HEI	
Rate of fire:	4,000–4,400 rd per min
w/M7 drive	6,000–7,200 rd per min
w/M12 drive	

EQUIPMENT

Sighting and Fire Control:
Sights are considered to be plane equipment and are furnished by the Air Force.

Basic Issue Items:

INSTRUCTIONAL MATERIAL

CARTRIDGE, 20-MILLIMETER DUMMY: M51 (T228), M51E5, and M51E6.

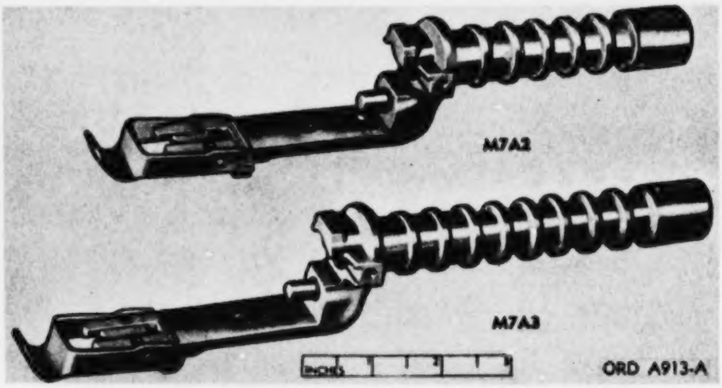
STORAGE AND SHIPMENT DATA

Within and Outside Continental United States

Shipped 1 gun per wooden box.	5 ft, 4¼ in.
Length	1 ft, 8½ in.
Width	2 ft, 1⅝ in.
Height	19.5 cu ft
Volume	450 lb
Gross weight	0.487
Ship tons	

References: TO 11W1-12-4-34, TO 11W1-12-4-32, TO 11W1-28-3-2, TO 11W1-28-3-4, TO 11W1-7-9-2, TO 11W1-7-9-4

LAUNCHER, GRENADE: M7A2, AND M7A3



Models	*Secondary item* *Line item No.*	*Federal stock No.*
M7A2, w/e	4-20700-20	1005-317-2476
M7A3, w/e	4-20700-10	1005-317-2477

General

LAUNCHER, GRENADE: M7A2 or M7A3 is used for launching grenades and ground signals from RIFLE, CALIBER .30: U.S., M1, M1C (Sniper's), or M1D (Sniper's). Each launcher is composed of a sleeve (tube) having a series of annular rings around its periphery, attached to a bracket. A spring holds the grenade or ground signal on the sleeve. With the grenade in place on the launcher, the rings are used in conjunction with the angle of elevation to determine range. The greater the number of rings exposed, the shorter the range. As the angle of elevation is increased, the range is increased.

Caution: Never under any circumstances fire service ammunition when a grenade or ground signal is in place on the launcher.

Differences among models

The main difference between the launcher M7A2 and M7A3 is the M7A3 is 1½ inches longer. The increased sleeve length provides higher velocity with flatter trajectory. Extra range rings are included in the sleeve.

Data plate location

The model number of the launcher is stamped on the bracket.

Classification: Standard B (all models) (OTCM 36841).

CHARACTERISTICS

Weight	12 oz
Length overall:	
M7A2	7½ in.
M7A3	9 in.
Outside diameter of tube	⅞ in.

AMMUNITION

Types:	
Rifle grenades:	
For launcher M7A2	AT, practice (M11-series and M29), colored smoke (M22-series), colored streamer smoke (M23-series), WP smoke (M19 or M19A1).
For launcher M7A3	AT, practice (M11-series and M29), colored smoke (M22-series), colored streamer smoke (M23-series), WP smoke (M19 or M19A1), HEAT (M31).
Hand grenades:	
Used with ADAPTER, grenade projection:	
M1	fragmentation (Mk 2), practice (M21).
M1A1 or M1A2	fragmentation (Mk 2 and M26), practice (M30 and M21), WP smoke (M34).
Chemical, M2 or M2A1	offensive incendiary (TH), irritant (CN-DM and CN (tear)), WP smoke, and HC smoke.
Ground signals	colored smoke (M62, M64, M65, and M66), star cluster (M18, M20, M22, and M52), star parachute (M17, M19, M21, and M51).
Cartridge	CARTRIDGE, GRENADE: rifle, cal. .30 M3

PERFORMANCE

Maximum range (w/CARTRIDGE, GRENADE: rifle, cal. .30, M3):	
Rifle grenades:	
AT, practice (M11A4) (45° elevation)	185 meters
HEAT (M31) (18° elevation)	120 meters
Smoke, WP (M19A1) (45° elevation)	195 meters
Hand grenades:	
Fragmentation (30° elevation using ADAPTER, GRENADE PROJECTION: M1A2)	160 meters
Chemical (45° elevation, using ADAPTER, GRENADE PROJECTION: M2A1)	145 meters
Ground signals	180 to 215 meters

EQUIPMENT

Sighting and Fire Control:

The following item is considered equipment and is issued as such:

SIGHT, RIFLE GRENADE LAUNCHER: M15, w/e

Basic Issue Items: See TM 9-1005-234-14P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 launchers per wood box (VCI pack).

Length	1 ft, 9½ in.
Width	1 ft, 6½ in.
Height	1 ft, 6½ in.
Volume	4.3 cu ft
Gross weight	122 lb
Ship tons	0.11

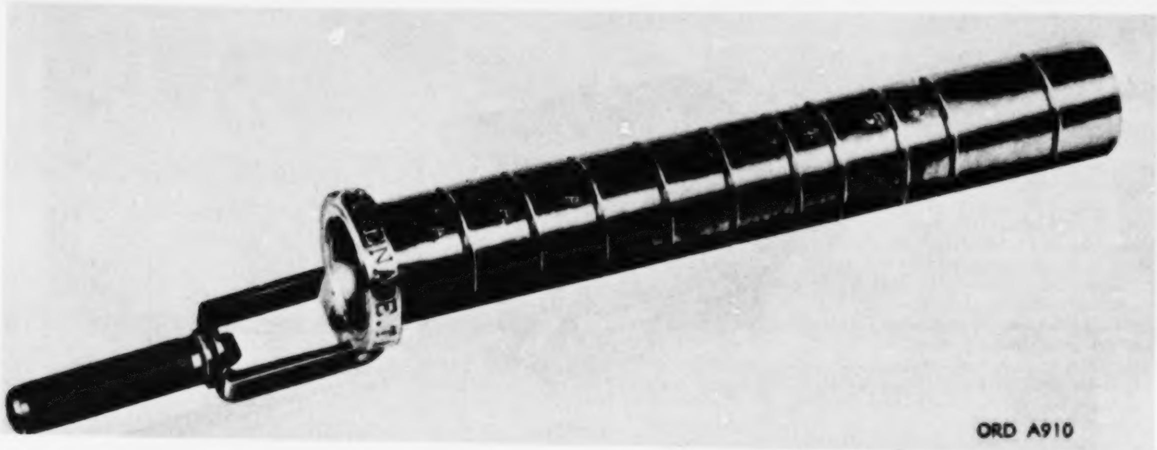
Outside Continental United States

Shipped 50 launchers per wood box (VCI pack).

Length	1 ft, 9½ in.
Width	1 ft, 6½ in.
Height	10 in.
Volume	2.3 cu ft
Gross weight	62 lb
Ship tons	0.06

References: TM 9-1005-234-14P, TM 9-2205, FM 23-30.

LAUNCHER, GRENADE: M76 (T140)



ORD A910

Model	*Secondary item Line item No.*	*Federal stock No.*
M76	4-20675-10	1005-722-3098

General

LAUNCHER, GRENADE: M76 (T140) is a cylindrical shaped sleeve with a hinged latching mechanism connected to a collar on the rear of the sleeve. Range setting calibration marks are provided on the sleeve for varying the position of the grenade. The launcher is used with RIFLE, 7.62-MILLIMETER, AUTOMATIC: M14 for launching fragmentation or antitank grenades.

CAUTION: Never under any circumstances fire service ammunition when a grenade is in place on the launcher.

Differences among models

Data plate location

Data are located on the barrel of the launcher.

Classification: Standard A (for U.S. Marine Corps use only) (OTCM 37269).

CHARACTERISTICS

Weight	7 oz
Length overall	8¼ in.
Outside diameter of tube	⅞ in.

AMMUNITION

Types	AT, fragmentation
Cartridge	CARTRIDGE, GRENADE: rifle, 7.62-mm, NATO, M64

PERFORMANCE

Maximum range	

EQUIPMENT

Sighting and Fire Control:

SIGHT, RIFLE GRENADE LAUNCHER: M15, w/e.

Basic Issue Items: See TM 9-1005-234-14P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

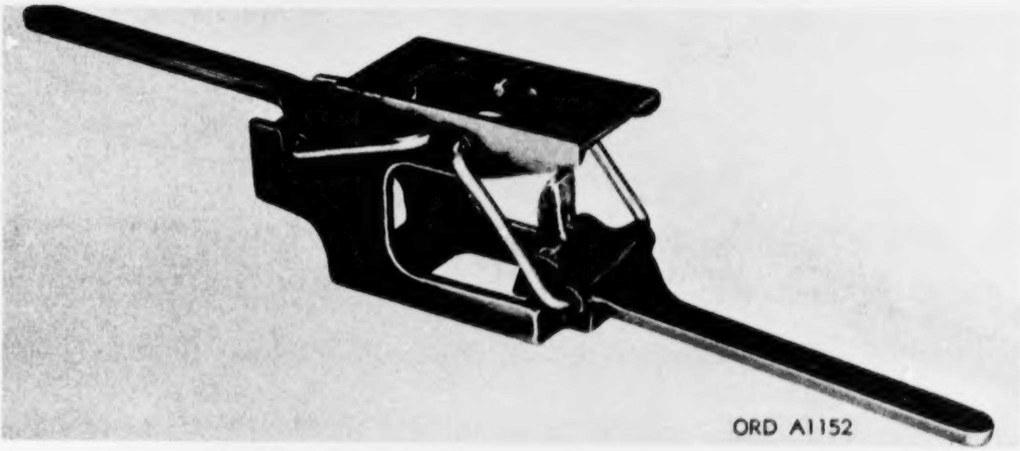
Within and Outside Continental United States

Shipped 327 launchers per wood box (VCI pack).

Length	2 ft, 6½ in.
Width	1 ft, 9¼ in.
Height	11⅝ in.
Volume	4.28 cu in.
Gross weight	198 lb.
Ship tons	0.107

References: FM 23-30, TM 9-1005-223-12, TM 9-1005-234-14P

LINKER-DELINKER, 20-MILLIMETER, HAND: M24 (T52) AND M24A1



Model	*Secondary item Line item No.*	*Federal stock No.*
M24		1005-715-9071
M24A1		

General

LINKER-DELINKER, 20-MILLIMETER, HAND: M24 (T52) and M24A1 is a hand-operated device which is used for linking or delinking belted M55-series 20-mm ammunition linked with LINK, CARTRIDGE, METALLIC BELT 20-MILLIMETER: M17.

Differences among models

Data plate location

Classification:

M24	Limited Standard (AMCTC item 2565)
M24A1	Standard A (for U.S. Air Force use only) (AMCTC item 2565)

CHARACTERISTICS

Weight	1 lb, 7 oz
Length (handles folded over body)	7 in.
Width (handles folded over body)	2½ in.
Height (handles folded over body)	4 in.
Capacity	

PERFORMANCE

Loading rate:

M24

M24A1

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped linker-delinker per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

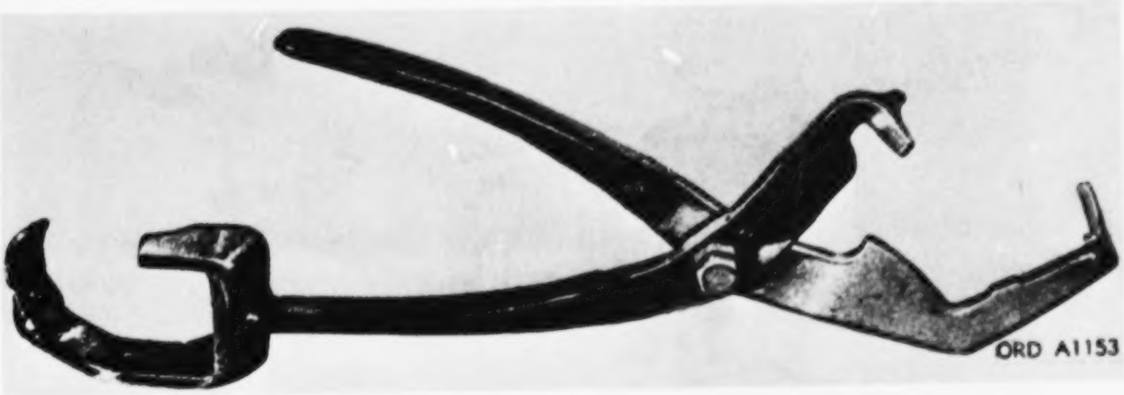
Outside Continental United States

Shipped linker-delinker per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TO 34Y36-2-11.

LINKER-DELINKER, 20-MILLIMETER, HAND: M25



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M25		1005–779–0853

General

LINKER-DELINKER, 20-MILLIMETER, HAND: M25 is a hand-operated device which is used for linking or delinking belted M55-series 20-mm ammunition linked with LINK, CARTRIDGE, METALLIC BELT, 20-MILLIMETER: M14 for GUN, 20-MILLIMETER, AUTOMATIC: M61.

Differences among models

Data plate location

Classification: Standard (for U.S. Air Force use only) (OTCM 37565).

CHARACTERISTICS

Weight	10⅓ oz
Length	12 in.
Width	2⅓ in.
Height	1⅓ in.
Capacity	

PERFORMANCE

Loading rate

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 50 linker-delinkers per shipping container.

Length	1 ft, 6 in.
Width	1 ft, 1 in.
Height	1 ft, 1⅛ in.
Volume	7.8 cu ft
Gross weight	54 lb
Ship tons	0.05

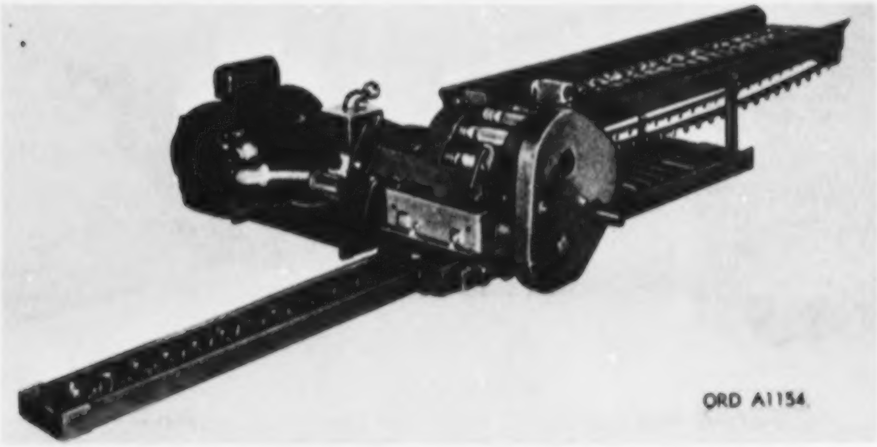
Outside Continental United States

Shipped 50 linker-delinkers per shipping container.

Length	1 ft, 6 in.
Width	1 ft, 1 in.
Height	1 ft, 1⅛ in.
Volume	7.8 cu ft
Gross weight	54 lb
Ship tons	0.05

References:

LINKER-DELINKER, 20-MILLIMETER, POWERED: M23 (T51)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M23		1005-715-9073

General

LINKER-DELINKER, 20-MILLIMETER, POWERED: M23 (T51) is an electrically operated device which is used for linking or delinking M55-series 20-mm ammunition with either LINK, CARTRIDGE, METALLIC BELT, 20-MILLIMETER: M14 (T766E1) or LINK, CARTRIDGE, METALLIC BELT, 20-MILLIMETER: M17 (T99).

Differences among models

Data plate location

Classification: Standard (for U.S. Air Force use only) (OTCM 37452).

CHARACTERISTICS

Linker-delinker:
  Weight .... 125 lb
  Length:
    Without ammunition feed trays .... 16 in.
    With ammunition feed trays .... 90 in.
  Width .... 25 in.
  Height .... 11 in.
Motor:
  Horsepower ....
  Volt 110
  Cycle ....
  Phase ....

PERFORMANCE

Normal operating speed .... rd per min

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

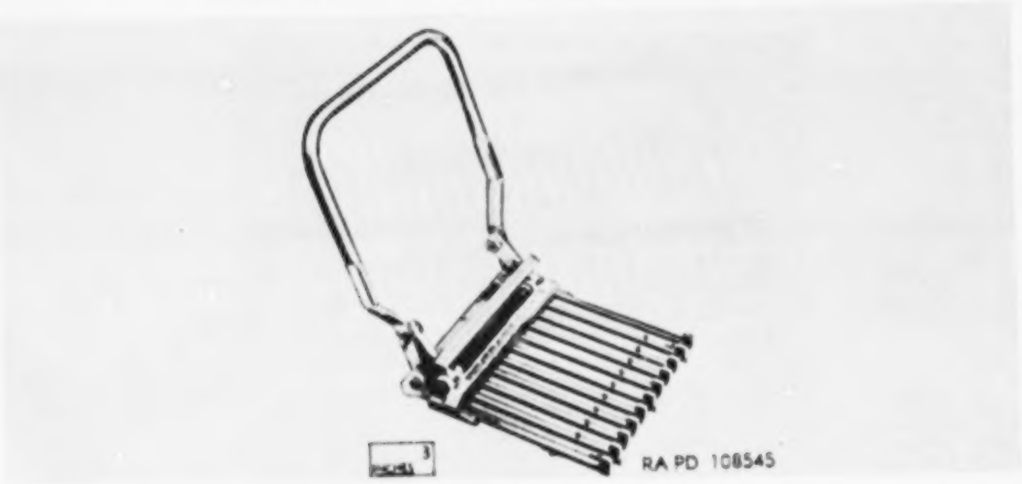
Shipped linker-delinker per
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped linker-delinker per
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References:

MACHINE, LINK-DELINKING, CALIBER .50, M7



RA PD 108545

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M7		1005-299-1268

General

MACHINE, link-delinking, caliber .50, M7 is used to insert caliber .50 cartridges into caliber .50 links to form a linked belt of ammunition or to remove caliber .50 cartridges from a linked belt of ammunition. I tconsists of a base, handle, slide (bar), and delinker (bar). It may be screwed to a bench, ammunition box, or other suitable base when in use. The linking operation, with the delinker (bar) up, is performed by pushing the loading handle forward which will load ammunition to the correct depth in the links. The delinking operation, with the delinker (bar) down, is performed by pushing the loading handle forward until the delinker engages the notch in the cartridge base and then pulling back on the loading handle, thereby removing the cartridges from the links.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	19 lb
Length	1 ft
Width	1 ft, $2\frac{15}{16}$ in.
Height (handle folded down)	$4\frac{1}{4}$ in.
Capacity	10 rd

PERFORMANCE

Average load handle necessary to load links	43 lb
Loading rate:	
One man	approx 1,040 rd per hr
Two men	approx 2,000 rd per hr

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 machines per wood shipping container.

Length	2 ft, 4 in.
Width	1 ft, $5\frac{5}{8}$ in.
Height	1 ft, $5\frac{1}{4}$ in.
Volume	4.9 cu ft
Gross weight	148 lb
Ship tons	0.12

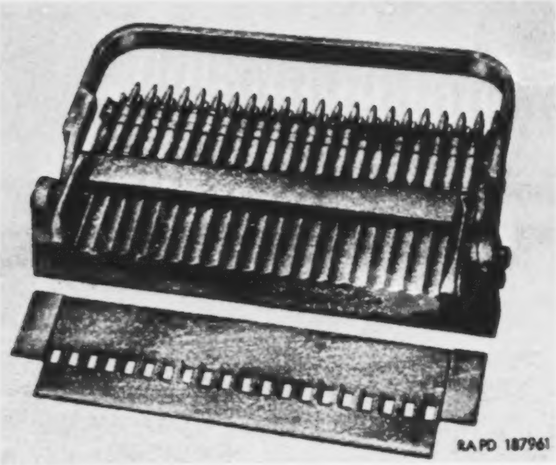
Outside Continental United States

Shipped 6 machines per wood shipping container.

Length	2 ft, 4 in.
Width	1 ft, $5\frac{1}{2}$ in.
Height	1 ft, $5\frac{5}{8}$ in.
Volume	4.9 cu ft
Gross weight	152 lb
Ship tons	0.12

References: SNL A-38, SNL A-39, SNL A-59, SNL A-61; TM 9-2021.

MACHINE, LINK-LOADING, HAND, CALIBER .30, M3 W/ATTACHMENT, DELINKING, CALIBER .30, M8



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M3 w/attachment M8	------------------	1005-591-0219

General

MACHINE, link-loading, hand, caliber .30, M3 is used for the rapid loading of caliber .30 ammunition into metallic links. It may be screwed to a bench, ammunition box, or other suitable base when in use. The loading is performed by the operation of the loading handle which when pushed forward to the stop, will load the ammunition to the correct depth in the links. A delinking attachment M8 is provided which consists of a steel plate which, when placed on the bed of the M3 machine, permits delinking of 20 rounds per stroke and immediate separation of the links and rounds by lifting the plate off the machine and sliding the links and rounds separately into boxes or on the bed of a linking machine.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Machine M3:

Weight	10 lb, 11 oz
Length	13 5/16 in.
Width	8½ in.
Height (handle folded down)	2 13/16 in.
Capacity	20 rd

Attachment M8:

Length	12¼ in.
Width	3¾ in.

PERFORMANCE

Machine M3:

Average load on handle necessary to load links	21 lb
Loading rate:	
One man	approx 1,040 rd per hr
Two men	approx 2,000 rd per hr

Attachment M8:

Normal operation speed	approx 250 rd per 2½ min

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 machines w/attachments per shipping container.

Length	1 ft, 9¾ in.
Width	1 ft, 8 in.
Height	1 ft, 3½ in.
Volume	3.9 cu ft
Gross weight	135 lb
Ship tons	0.10

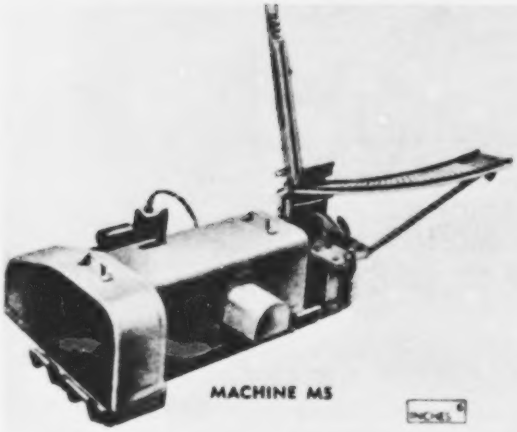
Outside Continental United States

Shipped 10 machines w/attachments per shipping container.

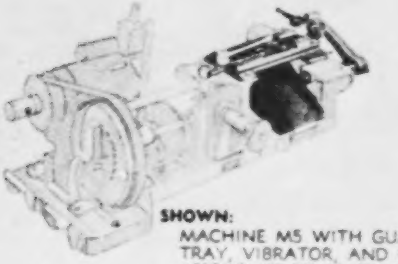
Length	1 ft, 9¾ in.
Width	1 ft, 8¼ in.
Height	1 ft, 3¾ in.
Volume	4. cu ft
Gross weight	137 lb
Ship tons	0.10

References: SNL A-5, SNL A-6, SNL A-89; TM 9-2005, TM 9-2205.

MACHINE, LINKING, POWERED, CALIBER .50, M5 W/ATTACHMENT, DELINKING, CALIBER .50, M7



MACHINE M5



SHOWN:
MACHINE M5 WITH GUARD, TRAY, VIBRATOR, AND CHUTE ASSEMBLIES REMOVED AND ATTACHMENT M7 ASSEMBLED

ORD A1099

Model	*Line item No.*	*Federal stock No.*
M5 w/attachment M7		1005-591-0118

Secondary item

General

MACHINE, linking, powered, caliber .50, M5 is an electrically or manually operated machine which is used to insert caliber .50 ammunition into metallic links at a speed much greater than that attained by hand operated tools. Provision has been made so that in the event of power failure a handcrank can be attached and linking continued at a reduced speed. A delinking attachment M7 is provided consisting of several units which may be quickly and easily attached to the powered linking machine to delink cartridges from caliber .50 metallic link belts.

Differences among models

Data plate location

Identification plate is located on the frame assembly.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Machine M5:
- Weight .... 312 lb
- Length .... 4 ft, 5⅝ in.
- Width .... 2 ft, 9⅝ in.
- Height .... 3 ft, ½ in.

Motor:
- Horsepower .... ¼
- Volt 110
- Cycle 60
- Phase .... sgle

Attachment M7:
- Weight .... 27 lb

PERFORMANCE

Machine M5:
- Normal operating speed .... 60-75 rd per min

Attachment M7:
- Normal operating speed .... 135-150 rd per min

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Machine M5:

Within Continental United States

Shipped machine per wood box.
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

Outside Continental United States

Shipped machines per
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

Attachment M7:

Within Continental United States

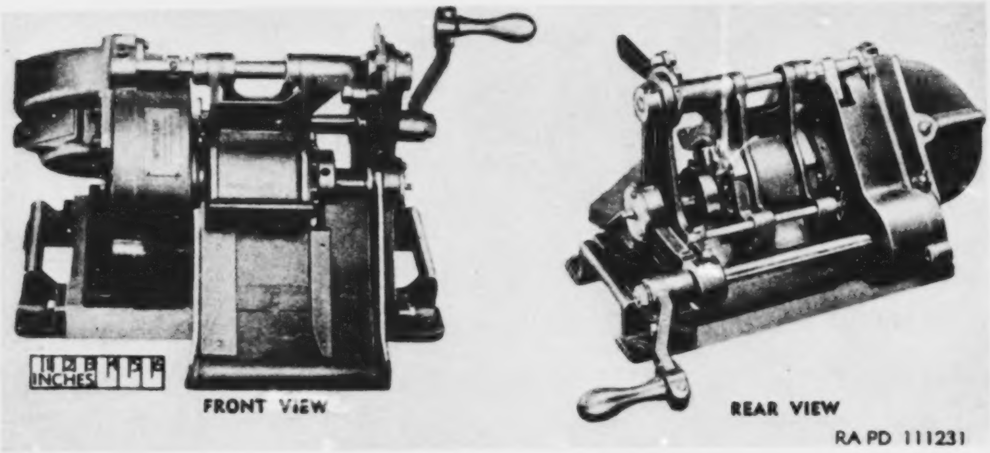
Shipped machine per wood box.
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

Outside Continental United States

Shipped machines per
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

References: TM 9-218.

MACHINE, REPOSITIONING, CALIBER .50, M15



RA PD 111231

Secondary item

Model	*Line item No.*	*Federal stock No.*
M15		1005–716–1941

General

MACHINE, repositioning, caliber .50, M15 is a small lightweight, portable, hand-operated machine used to reposition cartridges which may become misalined or loose in caliber .50 link belts.

Differences among models

Data plate location

Identification plate is located on the right-hand frame assembly and instruction plate on the plunger ring gear guard.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	58 lb
Length	1 ft, 8¼ in.
Width	1 ft, 4⅝ in.
Height	1 ft, $2\frac{13}{16}$ in.

PERFORMANCE

Normal operating speed	400 to 500 rd per min

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

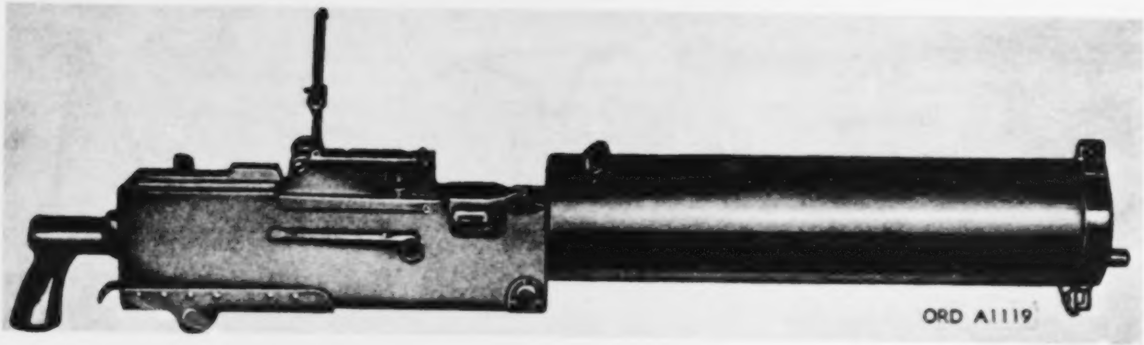
Shipped 1 machine per wood box.
Length ------
Width ------
Height ------
Volume ------
Gross weight ------
Ship tons ------

Outside Continental United States

Shipped 1 machine per wood box.
Length ------
Width ------
Height ------
Volume ------
Gross weight ------
Ship tons ------

References: SNL A-79, TM 9-220.

MACHINEGUN, CALIBER .30: BROWNING, M1917A1



Model	*Major item* *Line item No.*	*Federal stock No.*
M1917A1, w/e	4-17077-00	1005-672-1640

GENERAL

MACHINEGUN, CALIBER .30: Browning, M1917A1 is an automatic, recoil-operated, link-belt fed, water-cooled machinegun. The metallic link belt is used to feed the ammunition into the left side of the gun. The gun is mounted on MOUNT, TRIPOD, MACHINEGUN: caliber .30, M1917A1, M2, or MOUNT, TRIPOD WEAPON: M74 for ground use. This gun is known as the cal. .30 heavy machinegun.

Differences among models

Data plate location

Classification: Standard C (OTCM 37119).

CHARACTERISTICS

Weight:	
Gun and pintle (w/o water)	32 lb, 10 oz
Gun and pintle (w/water)	41 lb
Recoiling parts	7 lb, 5 oz
Barrel	3 lb
Length overall	3 ft, 2½ in.
Length of barrel	2 ft
Sight graduation	2,600 yd
Water jacket (capacity)	8 pt
Rifling:	
Length	1 ft, 9⅜ in. (71 cal.)
Number of grooves	4
Twist, right-hand	one turn in 10 in. (33.3 cal.)
Depth of grooves	0.0040 in.
Type of mechanism	short recoil
Feed	disintegrating metallic link belt
Capacity of feeding device	100 to 250 rd
Sight radius	2 ft, 2 in.
Sear release	9 lb
Trigger pull	7 lb (min), 12 lb (max)
Cooling	water

AMMUNITION

Types	ball, AP, API, blank, incendiary, tracer, and dummy
Links	M1

PERFORMANCE

Muzzle velocity (average):	
AP, M2	2,770 fps
Ball, M2	2,800 fps
Maximum range (30° elevation):	
AP, M2	3,160 yd
Ball, M2	3,500 yd
Rate of fire	450-600 rd per min

EQUIPMENT

Sighting and Fire Control:

- Clinometer, machinegun, M1917.*
  (Issued and supplied by special requisition only.)
- Table, firing, 0.30-A-4
- Table, firing, 0.30-J-1

Basic Issue Items: See ORD 7 SNL A-5.

INSTRUCTIONAL MATERIAL

Attachment, firing blank ammunition, cal. .30, M3A1.
CARTRIDGE, CALIBER .30, DUMMY: M40.
GUN, CALIBER .22, SUBCALIBER: M3.
For Graphic Training Aids and Devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within and Outside Continental United States

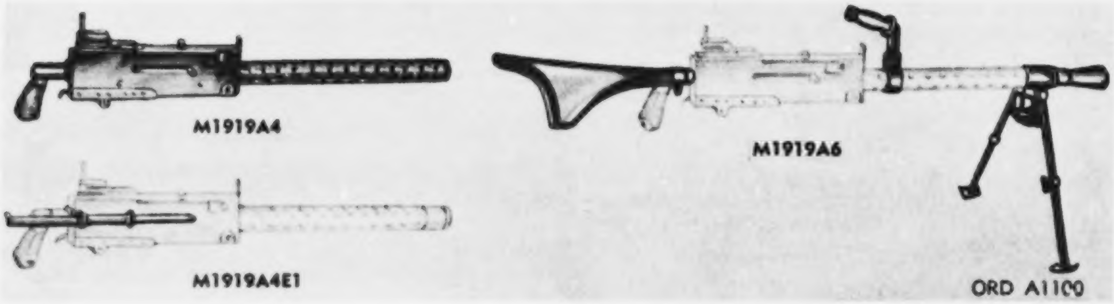
Shipped 1 gun per wood box.

Length	3 ft, 7 in.
Width	7½ in.
Height	8⅝ in.
Volume	1.64 cu ft
Gross weight	56 lb
Ship tons	0.04

References: SNL A-5, TM 9-2005, TM 9-2205, FM 23-55.

*For characteristics and data for item, see section 18.

MACHINEGUN, CALIBER .30: BROWNING, M1919A4 FLEXIBLE, M1919A4E1, AND M1919A6



	Major item	
Model	*Line item No.*	*Federal stock No.*
M1919A4, w/e	4–17082–00	1005–672–1643
M1919A4E1		1005–716–2922
M1919A6, w/e	4–17097–00	1005–672–1649

General

MACHINEGUN, CALIBER .30: Browning, M1919A4 flexible, M1919A4E1, and M1919A6 is an automatic, recoil-operated, link-belt fed, air-cooled machinegun. The metallic link belt is used to feed the ammunition into the left side of the gun. The backplate is equipped with a pistol grip. The M1919A4 is a general purpose offensive or defensive weapon which can be mounted on MOUNT, TRIPOD, MACHINEGUN: caliber .30, M1917A1, M2, or MOUNT, TRIPOD, WEAPON: M74. The machinegun M1919A4E1 is coaxially mounted with larger caliber weapons on various combination gun mounts for use in tanks. The machineguns M1919A4 and M1919A4E1 are known as the caliber .30 heavy barrel machineguns and the machinegun M1919A6 is known as the caliber .30 light machinegun. Machinegun M1919A6 is a substitute for the M1919A4.

Differences among models

The machinegun M1919A4E1 is equipped with a charging bar for easier loading in a cramped position such as a tank turret.

The machinegun M1919A6 has a shoulder stock attached to the back plate buffer tube, a bipod attached to the front end of the barrel jacket, a carrying handle, flash hider attached to the barrel, and the barrel is lighter.

Data plate location

Data stamped on the right-hand side plate of the receiver assembly.

Classification:	M1919A4	Standard B (OTCM 36841).
	M1919A4E1	Standard C (OTCM 37284).
	M1919A6	Standard B (OTCM 36841).

CHARACTERISTICS

Weight of gun:	
M1919A4 and M1919A4E1	31 lb
M1919A6 (incl shoulder stock and bipod)	32 lb, 8 oz
Weight of barrel:	
M1919A4 and M1919A4E1	7 lb, 5 oz
M1919A6	4 lb, 10 oz
Weight of stock (M1919A6)	1 lb, 12 oz
Weight of pintle and combined elevating and traversing mechanism (M1919A4 and M1919A4E1 only)	4 lb, 12 oz
Weight of recoiling parts:	
M1919A4 and M1919A4E1	11 lb, 12 oz
M1919A6	7 lb, 8 oz
Length overall:	
M1919A4 and M1919A4E1	3 ft, 6 in.
M1919A6	4 ft, 5 in.
Length of barrel	2 ft
Rifling:	
Length	1 ft, 9½ in. (71 cal.)
Number of grooves	4
Twist, right hand	one turn in 10 in. (33.3 cal.)
Depth of grooves	0.0040 in.
Sight graduations	2,400 yd
Operation	short recoil
Feed	disintegrating metallic link belt
Capacity of feeding device:	
M1919A4 and M1919A4E1	
M1919A6	100 to 250 rd
Sight radius	1 ft, 2 in.
Sear release	9 lb
Trigger pull:	
M1919A4 and M1919A4E1	7 lb (min), 12 lb (max)
M1919A6	8 lb, 8 oz
Cooling	air

AMMUNITION

Types	ball, AP, API, blank, incendiary, tracer, frangible (M1919A4E1 only), and dummy.
Links	M1

PERFORMANCE

Muzzle velocity (average):	
AP, M2	2,770 fps
Ball, M2	2,800 fps
Maximum range (30° elevation):	
AP, M2	3,160 yd
Ball, M2	3,500 yd
Rate of fire:	
M1919A4 and M1919A4E1	400–550 rd per min
M1919A6	400–550 rd per min

EQUIPMENT

Sighting and Fire Control:

M1919A4 and M1919A4E1:

Table, firing, 0.30–A–4

Table, firing, 0.30–J–1

M1919A6:
    Table, firing, 0.30-J-1

Basic Issue Items: See ORD 7 SNL A-6.

INSTRUCTIONAL MATERIAL

Adapter, barrel jacket (1005-833-3545) (for M1919A6)

ATTACHMENT, FIRING, BLANK: ammunition, cal. .30, M6 (for M1919A4 and M1919A4E1).

ATTACHMENT, FIRING, BLANK: ammunition, cal. .30, M9 (M1919A6).

For graphic training aids and devices, see DA Pam 310-5.

GUN, CALIBER .22, SUBCALIBER: M4

STORAGE AND SHIPMENT DATA

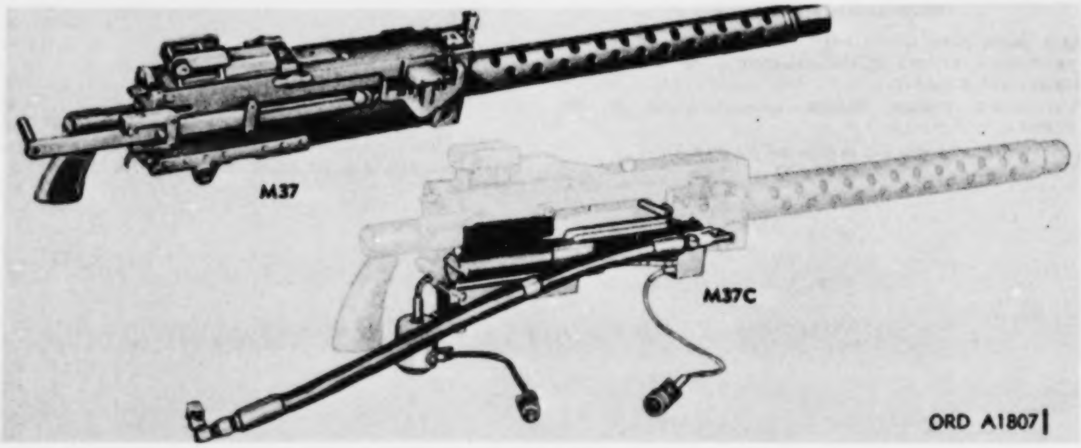
Within and Outside Continental United States

Shipped 1 machinegun per wood box (VCI pack).

Length	3 ft, 10 in.
Width	7 in.
Height	9 in.
Volume	1.6 cu ft
Gross weight:	
M1919A4	55 lb
M1919A4E1	54 lb
M1919A6	56 lb, 8 oz
Ship tons	0.04

References: SNL A-6, TM 9-2005, TM 9-2205; FM 23-55.

MACHINEGUN, CALIBER .30: TANK, M37 (T153) AND M37C, FIXED



ORD A1807

Major item

Model	*Line item No.*	*Federal stock No.*
M37		1005-716-2946
M37C		1005-525-1365

General

MACHINEGUN, CALIBER .30: tank, M37 (T153) and M37C, fixed, is an automatic, recoil-operated, link-belt fed, air-cooled machinegun. The M37 is designed for both fixed and flexible uses. It is coaxially mounted with larger caliber weapons on various combination gun mounts for use on tanks. However, for emergency use, this weapon may be mounted on the MOUNT, TRIPOD, MACHINEGUN: M2* or M1917A1,* or MOUNT, TRIPOD, WEAPON: M74.** The M37C is designed for fixed use only. It is used for installation in the ARMAMENT, SUBSYSTEM, HELICOPTER, .30 CALIBER MACHINEGUN: XM1 or XM1E1.*

Each weapon has a backplate which is equipped with a pistol grip. They are known as caliber .30 heavy barrel machineguns.

Differences among models

The M37C is basically the M37 with the following components removed:

a. Retracting bar, link chute bolt stud, and component items of the front and rear sights, and the safety and its components.

b. The following components were added in place of the above items removed: charger assembly, quick disconnect coupling hose assembly, charger plate, straight (bolt) pin, solenoid assembly, link chute, attaching hardware, and barrel bearing.

Data plate location

The name and serial number of each gun is stamped on the right-side plate of the receiver and forward of the retracting bar guides.

Classification:

M37	Standard B (OTCM 37060)
M37C	Standard B (OTCM 38099)

CHARACTERISTICS

Caliber .30 Machinegun M37:	
Weight:	
Gun	31 lb
Barrel	7.28 lb
Length:	
Overall	3 ft, 5¾ in.
Barrel	2 ft
Rifling:	
Length	21.38 in.
Number of grooves	4
Twist, right-hand	one turn in 10 in.
Space required to open cover	(approx) 1 ft, 9¼ in.
Space to rear required for removing barrel	(approx) 2 ft, 6 in.
Feed	disintegrating metallic linker belt
Operation	recoil
Cooling	air

Caliber .30 Machinegun M37C:	
Weight:	
Gun	34.7 lb
Barrel	7.28 lb
Length:	
Overall	41 in.
Barrel	24 in.
Rifling:	
Length	21.38 in.
Number of grooves	
Twist, right-hand	one turn in 10 in.
Space required to open cover	8.75 in.
Space to rear required for removing barrel	24.00 in.
Feed	disintegrating metallic link belt
Operation	recoil
Cooling	air

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* For characteristics and data, see item on pages 2-46 and 2-47.
** For characteristics and data, see item in section 8.

AMMUNITION

Types	Ball, AP, API, blank, tracer, and dummy
Links	M1

PERFORMANCE

Muzzle velocity (average):	
AP, M2	2,770 fps
Ball, M2	2,800 fps
Maximum range (30-deg elevation):	
AP, M2	3,160 yd
Ball, M2	3,500 yd
Rate of fire	400-550 rd per min

EQUIPMENT

Sighting and Fire Control

Basic Issue Items: M37, See TM 9-2350-206-12
M37C

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .30 DUMMY: M40

STORAGE AND SHIPMENT DATA

M37:

Within and Outside Continental United States

Shipped 1 gun per shipping container

Length	3 ft, 10½ in.
Width	7½ in.
Height	8½ in.
Volume	1.7 cu ft
Gross weight	55 lb
Ship tons	0.04

M37C:

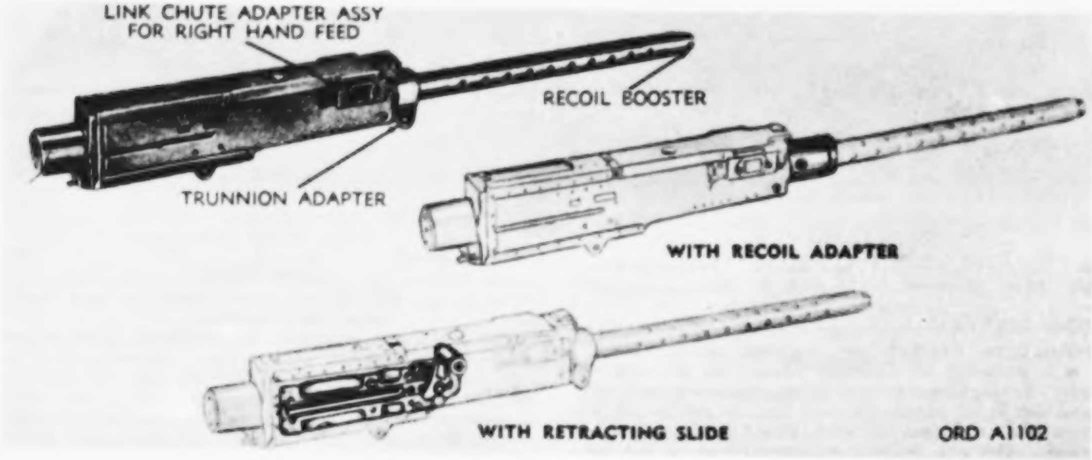
Within and Outside Continental United States

Shipped gun per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: M37—SNL A-89, FM 23-55, TM 9-2012, TM 9-2013.
M37C—TM 9-1005-240-20, TM 9-1005-240-20P,
TM 9-1005-240-34, TM 9-1005-240-35P.

MACHINEGUN, CALIBER .50: AN-M3, AIRCRAFT, BASIC



ORD A1102

Model	*Line item No.*	*Federal stock No.*
AN-M3, w/e	4-17102-20	1005-726-5650
AN-M3 w/retracting slide	------------------	-------------
AN-M3 w/recoil adapter	------------------	-------------

General

MACHINEGUN, CALIBER .50: AN-M3, aircraft, basic is a high-speed, recoil-operated, link-belt fed, air-cooled machinegun. By repositioning some of the component parts, ammunition may be fed into the gun from either the right or left side as desired. The metallic link belt is used in all cases. This gun is primarily used in aircraft, however, it can be used for antiaircraft purposes when mounted in MOUNT, GUN: antiaircraft caliber .50 machinegun, M63. The gun is without sights or trigger. It is fired with a solenoid. A spade grip-type backplate is not available for this gun. When this aircraft gun is used in gun mount M63, it is fired with a side plate trigger which is part of the mount. Direction of fire is checked by tracer bullets due to the absence of sights.

Differences among models

Several variations of the machinegun AN-M3 are in use. A retracting slide (not furnished with gun) is used for charging when used as an antiaircraft weapon. In some aircraft installations, the trunnion adapter is removed and a recoil adapter installed. This gun is similar in appearance to the caliber .50 basic aircraft Browning machinegun AN-M2. However, the rate of fire is much faster and many component parts, although similar, are not interchangeable. Some component parts of the gun AN-M2 have been replaced by different component parts in the gun AN-M3, such as, the backplate assembly which is larger; the front barrel bearing by a recoil booster; front and rear cartridge stops and link stripper by link chute adapters for either right- or left-hand feed.

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun w/o recoil adapter assy	64 lb, 8 oz
Recoil adapter assy	4 lb, 4 oz
Barrel	11 lb
Length:	
Overall	4 ft, 9¼ in.
Barrel	3 ft
Rifling:	
Length	2 ft, 9 in.
Number of grooves	8
Twist, right hand	one turn in 15 in.
Operation	short recoil
Feed	disintegrating metallic link belt
Cooling	air
Firing pin release:	
Pressure applied to sear slide	(max) 38 lb
Pressure applied to sear	(max) 26 lb
Belt pull (load that can be imposed on gun w/o obtaining malfunctions)	35 lb

AMMUNITION

Types	ball, AP, API, API-T, incendiary, tracer, headlight tracer, blank, and dummy.
Links	M2, M9 (T43), T31E2, and T31E3

PERFORMANCE

Muzzle velocity (average):	
Ball, M2	2,840 fps
Incendiary, M23 (T48)	3,450 fps
Maximum range:	
Ball, M2 (35° elevation)	7,275 yd
Incendiary, M23 (T48) (30° elevation)	5,500 yd
Rate of fire	1,150-1,250 rd per min

EQUIPMENT

Sighting and Fire Control:

Sights are considered to be plane equipment and are furnished by the Air Force.

Basic Issue Items:

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50 DUMMY: M2

STORAGE AND SHIPMENT DATA

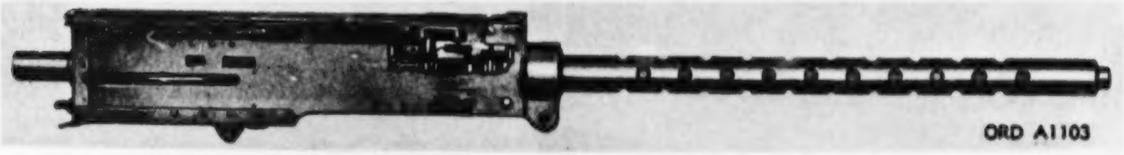
Within and Outside Continental United States

Shipped 1 gun per wood box.

Length	5 ft, 1½ in.
Width	8⅛ in.
Height	10⅝ in.
Volume	3.0 cu ft
Gross weight	97 lb
Ship tons	0.08

Reference: TM 9-2205.

MACHINEGUN, CALIBER .50: BROWNING, AN-M2, AIRCRAFT, BASIC


ORD A1103

Major item

Model	*Line item No.*	*Federal stock No.*
AN-M2, w/e	4-17102-10	1005-726-5644

General

MACHINEGUN, CALIBER .50: Browning, AN-M2, aircraft, basic is an automatic, recoil-operated, link-belt fed, air-cooled machinegun. By repositioning some of the component parts, ammunition may be fed into the gun from either the right or left side as desired. The metallic link belt is used to feed the ammunition into the weapon. This gun, as issued, is primarily used for fixed positions in aircraft. By the addition of a retracting slide group assembly for flexible positions or an operating slide group assembly for fixed positions, this weapon may be fired from gun mounts. When mounted on MOUNT, GUN: antiaircraft, caliber .50 machinegun, M63, a side plate trigger is used; on MOUNT, GUN: pedestal, twin caliber .50 machinegun, M65 or MOUNT, TRIPOD, MACHINEGUN: M3, a spade grip backplate conversion group assembly is used. When mounted on the gun mount M63, the direction of fire is checked by tracer bullets due to the absence of sights. On the pedestal gun mount M65, a sight is part of the mount. The rate of fire of this machinegun can be varied to a limited extent by adjusting the position of the oil buffer group assembly in the oil buffer body group.

Differences among models

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun (w/basic backplate)	61 lb
Gun (w/flexible backplate)	62 lb, 8 oz
Barrel	9 lb, 8 oz
Retracting slide group assy	3 lb
Operating slide group assy	1 lb, 8 oz
Length:	
Gun with retracting slide group assy	4 ft, 8¼ in.
Gun with operating slide group assy	4 ft, 9 in.
Barrel	3 ft
Rifling:	
Length	
Number of lands and grooves	8
Twist, right-hand	one turn in 15 in.
Operation	short recoil
Feed	disintegrating metallic link belt
Cooling	air

DATA PLATE LOCATION

AMMUNITION

Types	ball, AP, API, API-T, incendiary, tracer, headlight tracer, blank and dummy.
Links	M2, M9 (T43), T31E2, and T31E3

PERFORMANCE

Muzzle velocity (average):	
Ball, M2	2,840 fps
Incendiary, M23 (T48)	3,450 fps
Maximum range:	
Ball, M2 (35° elevation)	7,275 yd
Incendiary, M23 (T48) (30° elevation)	5,500 yd
Rate of fire	750-850 rd per min

EQUIPMENT

Sighting and Fire Control:

Table, firing, 0.50-H-1.

Sights are considered to be plane equipment and furnished by the Air Force.

Basic Issue Items: See ORD 7 SNL A-38.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50, DUMMY: M2 (C56579).

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 gun per wood box.

Length	5 ft, ⅝ in.
Width	7 in.
Height	9¼ in.
Volume	2.2 cu ft
Gross weight	100 lb
Ship tons	0.06

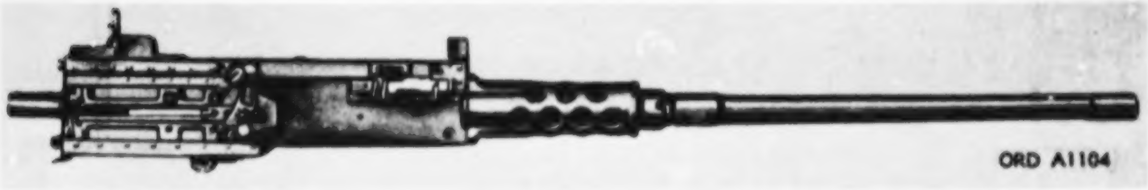
Outside Continental United States

Shipped gun per wood box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-38, TM 9-2021.

MACHINEGUN, CALIBER .50: BROWNING, M2, HEAVY BARREL, FIXED


ORD A1104

Model	*Line item No.*	*Federal stock No.*
M2		1005-726-5637

General

MACHINEGUN, CALIBER, .50: Browning, M2, heavy barrel, fixed is an automatic, recoil-operated, link-belt fed, air-cooled machinegun. By repositioning some of the component parts, ammunition may be fed from either the right or left side. The metallic link belt is used to feed the ammunition into the weapon. This gun differs from MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible machinegun M2 in that it does not have a bolt latch, backplate with spade grips and trigger, or a barrel carrier assembly. Heavy barrel guns do not recoil with as much force as other types of caliber .50 machineguns, therefore several part of the oil buffer assembly are eliminated and recoil oil is not used. It is charged by means of a retracting slide and fired by means of a side plate trigger. This gun is used in MOUNT, GUN: combination M54 on vehicles.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun	82 lb
Barrel	28 lb
Length:	
Overall	5 ft. 5 in.
Barrel	3 ft. 9 in.
Rifling:	
Length	
Number of lands and grooves	8
Twist, right-hand	one turn in 15 in.
Operation	short recoil
Feed	disintegrating metallic link belt
Capacity of feeding device	as desired
Cooling	air

AMMUNITION

Types	ball, AP, API, API-T, incendiary, tracer, headlight tracer, blank, and dummy.
Links	M2, M9 (T43), and T31E3

PERFORMANCE

Muzzle velocity (average):	
API, M8	3,050 fps
Ball, M2	2,930 fps
Maximum range:	
API, M8 (30° elevation)	(approx) 6,470 yd
Ball, M2 (35° elevation)	(approx) 7,400 yd
Rate of fire	450-555 rd per min

EQUIPMENT

Sighting and Fire Control:
Table, firing, 0.50-AA-T-1
Table, firing, 0.50-H-1

Basic Issue Items: See ORD 7 SNL A-39.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50 DUMMY: M2.

STORAGE AND SHIPMENT DATA

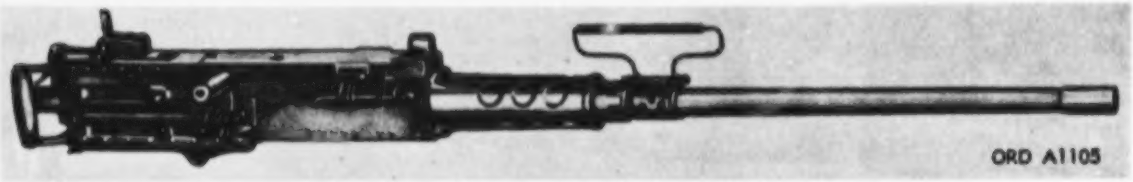
Within and Outside Continental United States

Shipped 1 gun per wood box.

Length	5 ft 9½ in.
Width	7⅝ in.
Height	10¼ in.
Volume	3.2 cu ft
Gross weight	117 lb
Ship tons	0.08

References: SNL A-39, TM 9-2021, TM 9-2205, FM 23-65.

MACHINEGUN, CALIBER .50: BROWNING, M2, HEAVY BARREL, FLEXIBLE



ORD A1105

	Major item	
Model	*Line item No.*	*Federal stock No.*
M2, w/o	4-17112-00	1005-322-9715

General

MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible is an automatic, recoil-operated, link-belt fed, air-cooled machinegun. By repositioning some of the component parts, ammunition may be fed from either the right or left side. The metallic link belt is used to feed the ammunition into the weapon. This gun is equipped with a backplate having spade grips, trigger, and bolt latch release. A bolt latch in the receiver will hold the bolt in the open position after each round is fired unless the bolt latch release on the backplate is in the locked position making the bolt latch inoperative. This gun may be mounted in MOUNT GUN: antiaircraft, caliber .50 machinegun, M63; MOUNT, GUN: pedestal, twin caliber .50 machinegun, M65; MOUNT, TRIPOD, MACHINEGUN: M3 and on most vehicles and tanks as an antiaircraft weapon. The gun is equipped with leaf-type sights and a barrel carrier assembly. A retracting slide assembly is furnished with each gun. Heavy barrel guns do not recoil with as much force as other types of caliber .50 machineguns; therefore, several parts of the oil buffer assembly are eliminated and recoil oil is not used.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun	82 lb
Barrel	28 lb
Length:	
Overall	5 ft, 5 in.
Barrel	3 ft, 9 in.
Rifling:	
Length	
Number of lands and grooves	8
Twist, right-hand	one turn in 15 in.
Operation	short recoil
Feed	disintegrating metallic link belt
Capacity of feeding device	as des'red
Cooling	air

AMMUNITION

Types	ball, AP, API, API-T, incendiary, tracer, headlight tracer, blank, and dummy.
Links	M2, M9 (T43), and T31E3

PERFORMANCE

Muzzle velocity (average):	
API, M8	3,050 fps
Ball, M2	2,930 fps
Maximum range:	
API, M8 (90° elevation)	6,470 yd (approx)
Ball, M2 (35° elevation)	7,460 yd (approx)
Rate of fire	450–555 rd per min

EQUIPMENT

Sighting and Fire Control:
Table, firing, 0.50AA-T-1
Table, firing, 0.50-H-1.

Basic Issue Items: See ORD 7 SNL A-39.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50 DUMMY: M2.

STORAGE AND SHIPMENT DATA

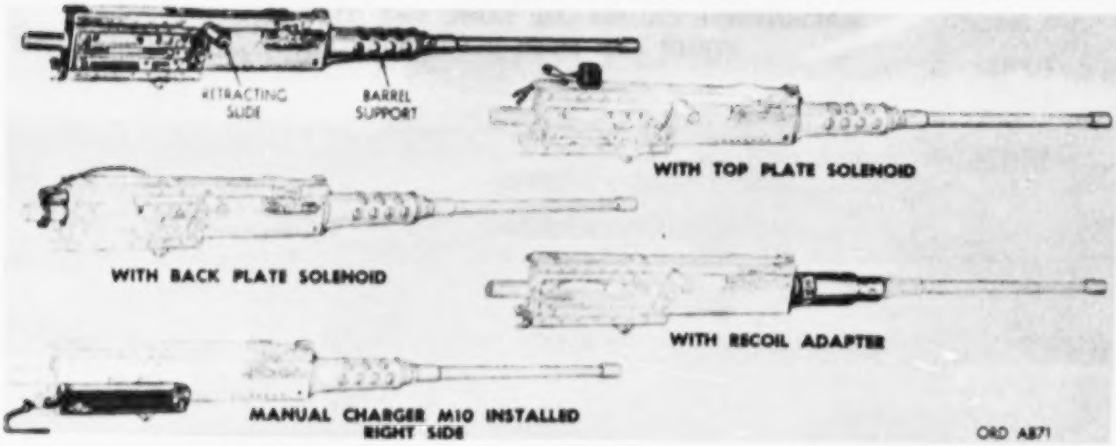
Within and Outside Continental United States

Shipped 1 gun per wood box.

Length	5 ft, 9½ in.
Width	9 in.
Height	10¼ in.
Volume	3.7 cu ft
Gross weight	126 lb
Ship tons	0.09

References: SNL A-39, TM 9-2021, TM 9-2205, FM 23-65.

MACHINEGUN, CALIBER .50: BROWNING, M2, HEAVY BARREL, TURRET TYPE



ORD A871

Major item

Model	*Line item No.*	*Federal stock No.*
M2		
With barrel support, backplate solenoid and M10 charger assembled on left side (for Cupola M1).		1005-693-4854
With barrel support, backplate solenoid and M10 charger assembled on right side (for Cupola M13).		1005-606-8412
With barrel support, retracting slide, and top plate solenoid (for multiple mount M45C).		1005-602-2105
With recoil adapter, backplate solenoid and M10 charger assembled on left side (for)		
With recoil adapter, backplate solenoid and M10 charger assembled on right side (for)		
With recoil adapter, backplate solenoid, retracting slide and top plate solenoid (for)		

General

MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, turret type, is an automatic recoil-operated, link-belt fed, air-cooled machinegun. By repositioning some of the component parts, ammunition may be fed from either the right or left side. The metallic link belt is used to feed the ammunition into the weapon. These guns are for ground use and antiaircraft fire in turret type mounts. The gun having a barrel support is used in the caliber .50 multiple machinegun mount M45C on the caliber .50 multiple machinegun trailer mount M55.

Differences among models

Two variations of the machinegun, M2 are in use. One is equipped with a barrel support and the other with a recoil adapter. The gun equipped with a barrel support is identical to the fixed caliber .50 heavy barrel machinegun M2 except the sights are removed. The gun, equipped with a recoil adapter, differs from the fixed gun in the elimination of sights and the substitution of a recoil adapter (Edgewater) for the barrel support. Both types are charged by means of a retracting slide or M10 manual charger, when gun is used in a cupola, and fired by means of an electrical backplate or top plate solenoid.

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun (w/barrel support)	80 lb
Gun (w/recoil adapter)	81 lb
Barrel	28 lb
Length:	
Overall	5 ft, 5 in.
Barrel	3 ft, 9 in.
Rifling:	
Length	(approx) 41⅜ in.
Number of lands and grooves	8
Twist, right-hand	one turn in 15 in.
Operation	short recoil
Feed	disintegrating metallic link belt
Cooling	air

AMMUNITION

Types	ball, AP, API, API-T, incendiary, tracer, headlight tracer, blank, and dummy.
Links	M2, M9 (T43, and T81E3)

PERFORMANCE

Muzzle velocity (average):	
API, M8	3,050 fps
Ball, M2	2,930 fps
Maximum range:	
API, M8 (30° elevation)	(approx) 6,470 yd
Ball, M2 (35° elevation)	(approx) 7,460 yd
Rate of fire	450-555 rd per min

EQUIPMENT

Sighting and Fire Control:
Table, firing, 0.50-H-1
Table, firing, 0.50-AA-T-1
Basic Issue Items: See ORD 7 A-59

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50 DUMMY: M2.

STORAGE AND SHIPMENT DATA

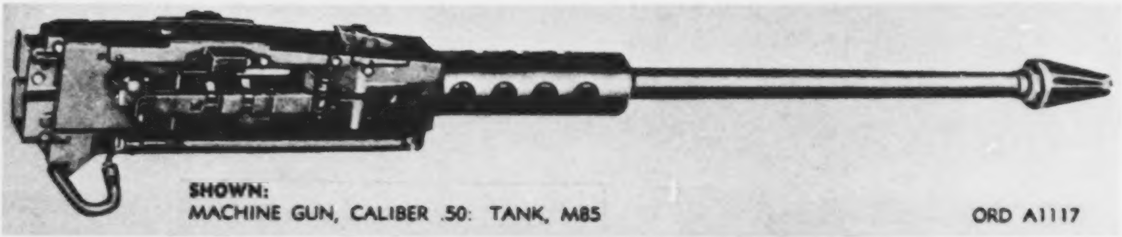
Within and Outside Continental United States

Shipped 1 gun per wood box (VCI pack).

Length	5 ft, 9½ in.
Width	7 in.
Height	9⅛ in.
Volume	2.6 cu ft
Gross weight	119 lb
Ship tons	0.07

References: SNL A-59, TM 9-2021, TM 9-2205, FM 23-65, TB 9-1005-213-10/1.

MACHINEGUN, CALIBER .50: TANK, M85 (T175E2) (FIXED) AND M85C (FLEXIBLE)


SHOWN:
MACHINE GUN, CALIBER .50: TANK, M85

ORD A1117

Major Item

Model	*Line item No.*	*Federal stock No.*
M85	....	1005-690-2790
M85C	....	1005-791-3379

General

MACHINEGUN, CALIBER .50: tank, M85 (T175E2) (fixed) and M85C (flexible) are automatic, recoil-operated, air-cooled, fixed head space weapons having a dual rate of fire. The gun was designed specifically for combat vehicle installation and is particularly suitable for installations presently using MACHINEGUN, CALIBER .50: M2. The simplicity of design allows experienced personnel to field strip the gun in less than 15 seconds and change barrel in less than 5 seconds. Change over from right-hand to left-hand feed is readily accomplished by removal and replacement of a limited number of components.

Differences among models

The M85C differs from the M85 in that it has provisions for mounting sights and spade grips with integral trigger extensions for manual firing.

Data plate location

Classification:	
M85	Standard A (OTCM (37088)
M85C	Classification pending

CHARACTERISTICS

Weight:	
Gun (complete)	65 lb
Recoiling parts	23.2 lb
Barrel	16.25 lb
Length:	
Overall (w/flash suppressor)	4 ft, 6½ in.
Barrel	3 ft
Rifling:	
Length	32.595 in.
Number of grooves	8
Twist, right-hand	one turn in 15 in.
Operation	recoil
Feed	disintegrating metallic link belt
Cooling	air

AMMUNITION

Types	ball, AP, API, API-T, incendiary, tracer, blank, and dummy
Link	M15, A2

PERFORMANCE

Muzzle velocity (average):	
API, M8	2,950 fps
Ball, M2	2,840 fps
Maximum range:	
API, M8	(approx) 6,375 yd
Ball, M2	(approx) 7,275 yd
Rate of fire:	
Fast	1,050 rd per min
Slow	350 to 450 rd per min

EQUIPMENT

Sighting and Fire Control:
Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 machinegun per shipping container

	M85	M85C
Length	3 ft, 9 in.	
Width	8 in.	
Height	1 ft, 2⅝ in.	
Volume	3.1 cu ft	
Gross weight	87 lb	
Ship tons	0.08	

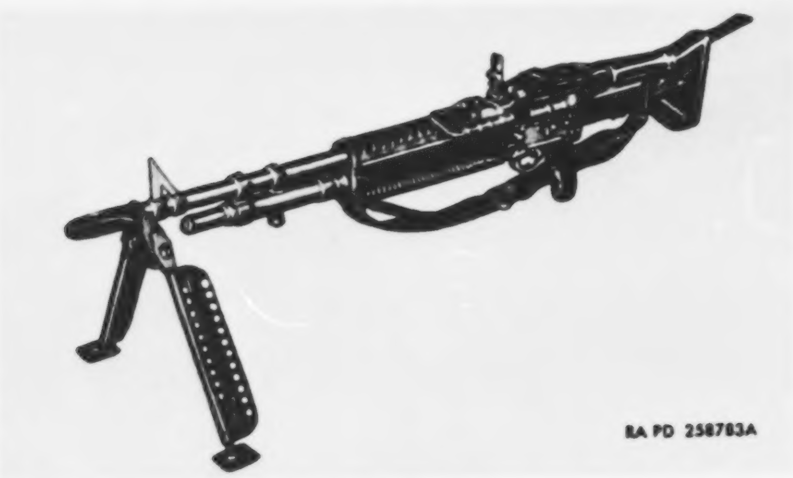
Outside Continental United States

Shipped 1 machinegun per shipping container

	M85	M85C
Length	3 ft, 9 in.	
Width	8 in.	
Height	1 ft, 2⅝ in.	
Volume	3.1 cu ft	
Gross weight	87 lb	
Ship tons	0.08	

References: TM 9-1005-231-34, TM 9-1005-231-35P

MACHINEGUN, 7.62 MILLIMETER: M60 (T161E3)



RA PD 258783A

Major Item

Model	*Line item No.*	*Federal stock No.*
M60	4-17125-00	1005-605-7710

General

MACHINEGUN, 7.62 MILLIMETER: M60 (T161E3) is a lightweight general purpose machinegun using NATO ammunition. It can be fired from the shoulder, hip, sitting, or prone position. In the prone or sitting position, the bipod or MOUNT, GUN: 7.62 millimeter machinegun, M122 may be used.

The front sight is in a fixed position and is permanently mounted. The rear sight is mounted on a spring-type dovetail base. In elevation, movement can be controlled with either a vernier adjusting knob or a quickset-type release. A vernnier-type windage adjusting knob is on the left side of the sight.

Differences among models

Data plate location

The name of the machinegun, model, and manufacturer are stamped on top of the receiver in front of the rear sight. The serial number is stamped on the left side of the receiver below the rear sight.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Gun	23.16 lb
Barrel (complete)	5.38 lb
Length:	
Overall	3 ft. 7½ in.
Barrel (w/socket)	1 ft. 10⅜ in.
Rifling:	
Length	(approx) 20 in.
Number of lands	4
Twist, right-hand	one turn in 12 in.
Operation	gas operated
Feed	link belt
Cooling	air
Sight graduations	1,200 yd
Trigger pull	11.5 lb (max); 6 lb (min)

AMMUNITION

Types (NATO)	AP, ball, dummy, tracer
Link	M13

PERFORMANCE

Muzzle velocity	2,800 fps
Maximum range	3,200 meters
Rate of fire	(approx) 550 rd per min

EQUIPMENT

Sighting and Fire Control:

TABLE, FIRING: 7.62-A-2

Basic Issue Items: See TM 9-1005-224-12.

INSTRUCTIONAL MATERIAL

CARTRIDGE, 7.62 MILLIMETER DUMMY: NATO, M63

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 machinegun, w/e, per shipping container (VCI pack).

Length	2 ft. 9⅞ in.
Width	1 ft. 1 in.
Height	10 in.
Volume	2.6 cu ft
Gross weight	50 lb
Ship tons	0.07

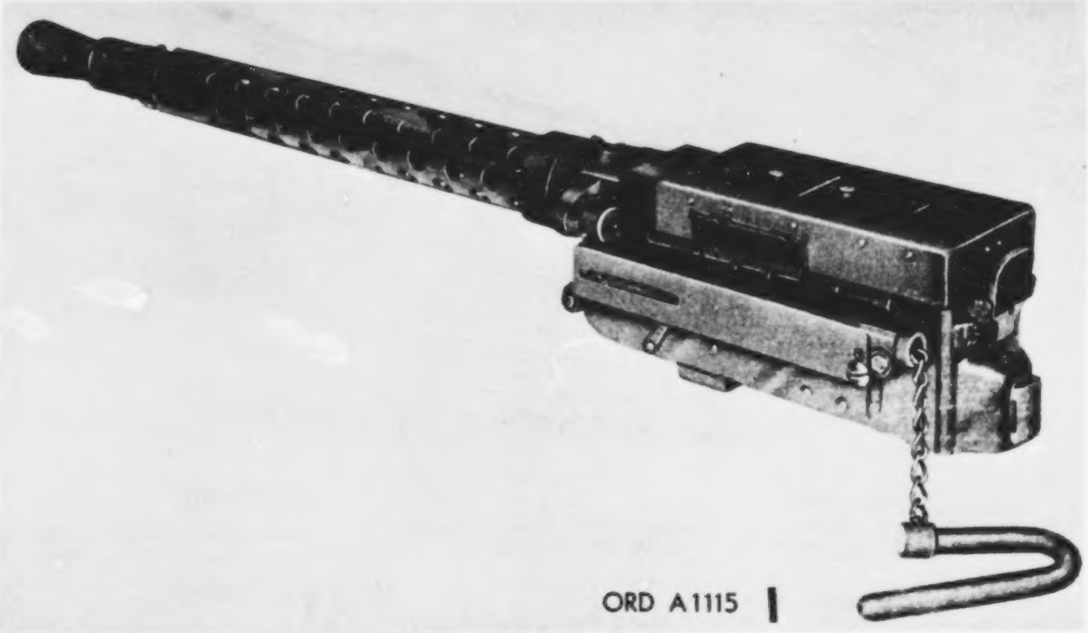
Outside Continental United States

Shipped 1 machinegun, w/e, per shipping container (VCI pack).

Length	2 ft. 10¾ in.
Width	1 ft. 1⅛ in.
Height	10⅝ in.
Volume	3.4 cu ft
Gross weight	53 lb
Ship tons	0.09

References: TM 9-1005-224-12, TM 9-1005-224-20P, TM 9-1005-224-34, TM 9-1005-224-34P, FM 23-67.

MACHINEGUN, 7.62-MILLIMETER: M73



Major Item

Model	*Line item No.*	*Federal stock No.*
M73		1005-679-6763

General

MACHINEGUN, 7.62-MILLIMETER: M73 is a lightweight, air-cooled weapon used primarily as a coaxial gun on tanks. It is disintegrating metallic link belt fed for either right or left side. It has a short receiver, is recoil operated with a gas assist to boost recoil, has a fixed head space, is fired from the open bolt position, and has a quick change barrel.

Differences among models

Data plate location

Classification: M73 ………………Standard A (OTCM 37060)

CHARACTERISTICS

Weight of gun (complete):	
M73	29.31 lb
Barrel	5.25 lb
Length:	
M73 (including flash suppressor)	38.00 in.
Barrel	22.00 in.
Rifling:	
Length	20 in.
Number of grooves	4
Twist, right-hand	one turn in 12 in.
Operation	recoil with gas assist
Feed	disintegrating metallic link belt
Cooling	air
Trigger push	15 lb

AMMUNITION

Types	AP, ball, tracer, dummy
Link	M13

PERFORMANCE

Muzzle, velocity	(approx) 2,800 fps
Maximum range	4,150 yd
Rate of fire	450 to 500 rd per min

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 machinegun per shipping container.

Length	3 ft, 1⅝ in.
Width	10¼ in.
Height	8⅝ in.
Volume	1.91 cu ft
Gross weight	41 lb
Ship tons	0.05

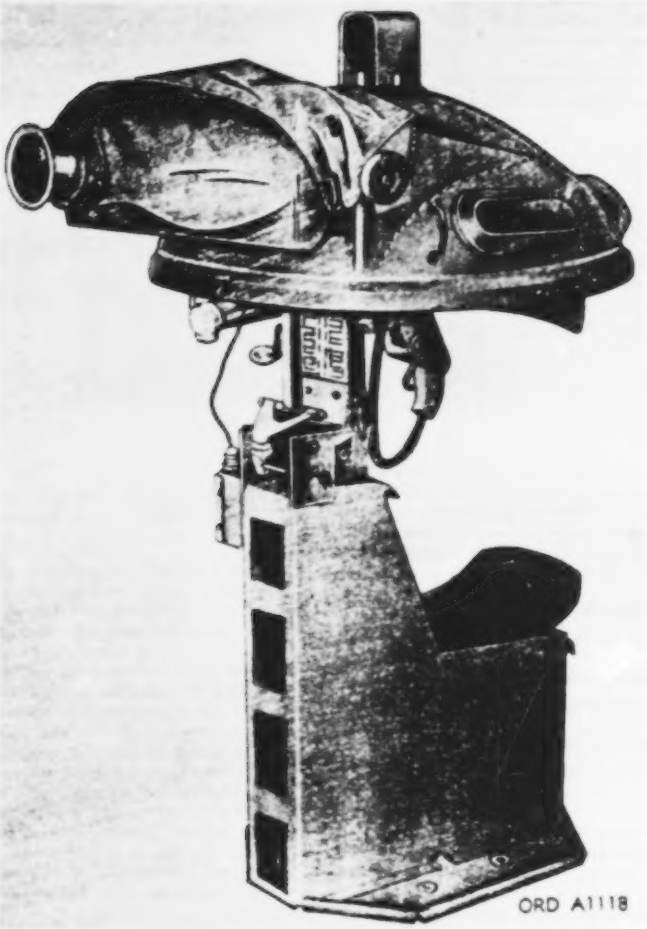
Outside Continental United States

Shipped 1 machinegun per shipping container.

Length	3 ft, 1⅝ in.
Width	10⅝ in.
Height	8½ in.
Volume	2.00 cu ft
Gross weight	41 lb
Ship tons	0.05

References: TM 9-1005-233-34, TM 9-1005-233-35P.

MOUNT, COMMANDER'S CUPOLA, M13



ORD A1118

Model	*Line item No.*	*Federal stock No.*
M13	------------	------------

General

MOUNT, commander's cupola, M13 is installed on CARRIER, PERSONNEL, FULL-TRACKED: armored, M59 (serial No. F2492 and up) and MORTAR, SELF-PROPELLED, FULL-TRACKED: 4.2-inch, M84 to provide the commander with reasonable armor protection, close-in defensive fire power, and target observation by permanently installed direct vision blocks or a periscope. It provides support for MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, turret type, and means for its loading, charging, and positioning in azimuth and elevation.

Differences among models

Data plate location

An identification plate is mounted in the cupola assembly between the azimuth and elevation drive assemblies, and another identical plate is mounted in front of the commander's seat.

Classification: Standard B (OTCM 37087).

CHARACTERISTICS

Weight (w/o machinegun)	800 lb
Length (w/o machine gun)	4 ft, 4 in.
Width or diameter	3 ft, ⅛ in.
Height (silhouette above vehicle)	1 ft, 2⅞ in.
Azimuth	360°
Elevation	57°
Depression	11°
Operation	manual

EQUIPMENT

Sighting and Fire Control:*

- Sight, periscope, M28 (furnished separately).
- Mount, periscope, M104A1 (furnished separately).

Basic Issue Items: See TM 9–2300–203–12.

* For characteristics and data, see item in section 14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped **mount per**

Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons --------------------------------------

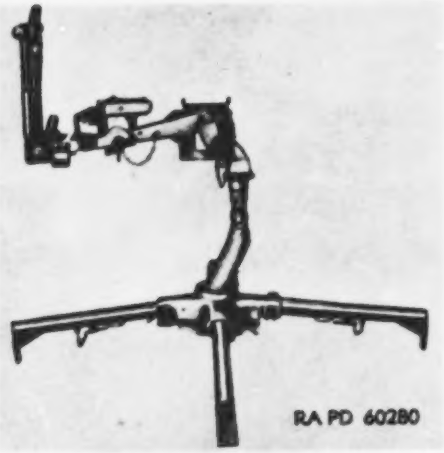
Outside Continental United States

Shipped **mount per**

Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons --------------------------------------

References: TM 9-1005-227-85; TM 9-1005-227-85P.

MOUNT, GUN: AA CALIBER .50 MACHINEGUN, M63



Major item

Model	*Line item No.*	*Federal stock No.*
M63, w/e	4-28965-10	1005-673-3246

General

MOUNT, GUN: AA, caliber .50 machinegun, M63 is a four-legged, low silhouette, medium weight, portable mount, used for antiaircraft fire. The mount can be easily disassembled into four compact assemblies: the leg assembly, the base assembly, the elevator assembly, and the cradle and yoke assembly which includes the trigger control mechanism. When disassembled, it is easily transportable. This mount is used primarily with MACHINEGUN, CALIBER .50: Browning, M2, flexible. For emergency use, MACHINEGUN, CALIBER .50: AN-M2 and AN-M3 aircraft, basic, and all cal. .50 Browning machineguns can also be mounted in this mount. The mount is rigid, as there are no recoil or shock-absorbing mechanisms, and no adjustments with the exception of a slight adjustment in the trigger control mechanism to provide proper contact with the side plate trigger mounted on the gun. There are no sights on the mount and direction of fire is checked by tracer bullets. A side plate trigger is used to fire the gun. The trigger is part of the mount and is left with the mount when the gun is removed.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
(W/ammunition box adapter)	144 lb
Four legs	24 lb
Base assembly	54 lb
Elevator assembly	12 lb
Cradle assembly	44 lb
Ammunition box adapter	10 lb
Height overall	42 in.
Length of leg	24 in.
Diameter of base (w/leg assembled)	52 in.
Maximum elevation	85°
Maximum depression	29°
Traverse	360°

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-39

INSTRUCTIONAL MATERIAL

For Graphic Training Aids and Devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box.

Length	3 ft, ⅛ in.
Width	1 ft, 11½ in.
Height	1 ft, 5½ in.
Volume	8.6 cu ft
Gross weight	233 lb
Ship tons	0.22

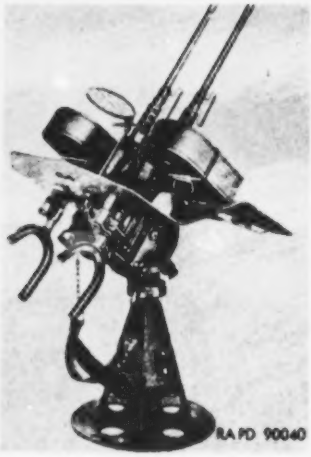
Outside Continental United States

Shipped mount

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-39, TM 9-2021, TM 9-2205.

MOUNT, GUN: PEDESTAL, TWIN CALIBER .50, M65 MACHINEGUN



Major item

Model	*Line item No.*	*Federal stock No.*
M65	4-24186-10	1005-324-9432

General

MOUNT, GUN: pedestal, twin caliber .50 machinegun M65 is a pedestal-type antiaircraft mount which mounts two MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible without change in backplate, or two MACHINEGUN, CALIBER .50: Browning, AN-M2, aircraft, basic, with spade grip backplate conversion group assembly and retracting slide group assembly. It is mounted principally on decks of boats; however, it may be used in many other installations having fixed foundations, such as docks, bridges, roofs, etc. The left side gun must be assembled for left-hand feed and left-hand charging; the right side gun must be assembled for right-hand feed and right-hand charging.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	825 lb
Maximum elevation	80°
Maximum depression	10°
Traverse	360°

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL A-55, Sec 33.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box.

Length	6 ft, 7 in.
Width	3 ft, 5⅝ in.
Height	3 ft, 6⅛ in.
Volume	79.7 cu ft
Gross weight	1,300 lb
Ship tons	1.99

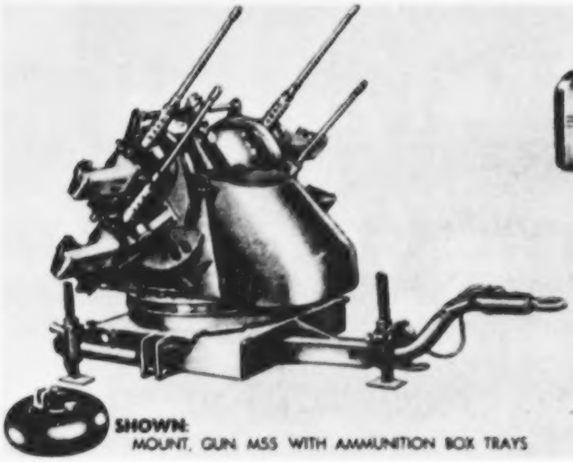
Outside Continental United States

Shipped mount per

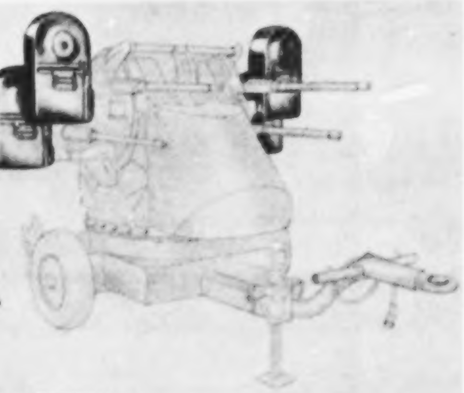
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-55, Sec 33, TM 9-280, TM 9-2205.

MOUNT, GUN: TRAILER, MULTIPLE CALIBER .50 MACHINEGUN, M55



SHOWN:
MOUNT, GUN M55 WITH AMMUNITION BOX TRAYS



SHOWN:
MOUNT, GUN M55 WITH
CHEST, AMMUNITION, CALIBER .50, M2 ORD A1106

Model	*Line item No.*	*Federal stock No.*
M55, w/e	4 25516-00	1005-673-4750

Major item

General

MOUNT, GUN: trailer, multiple caliber .50 machinegun, M55, is composed of MOUNT, GUN: caliber .50 machinegun, M45C and TRAILER, 1-ton, 2-wheel, machinegun mount, M20. The mount M45C is a power-driven, semiarmored gun mount with self-contained power units. A power charger produces electrical current to be stored in two 6-volt storage batteries. The electrical system operates from the storage batteries. This mount is constructed to accommodate four (two on each side) MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, turret type. The early models have four (two on each side) ammunition chests M2. On later models, these mounts have been modified to replace the chests with ammunition box trays (FSN 1005-659-0078). Power is directed by a pair of control handles placed directly in front of the operator's seat on the mount. This mount is normally mounted on the mount trailer M20.

The trailer M20 is a two-wheeled vehicle designed to transport mount M45C either by manpower or by a ¼-ton 4- by 4-truck. In an emergency, it can be coupled to any vehicle equipped with a pintle tow hook. The maximum towing speed over smooth surfaced roads is 10 miles per hour while over terrain, the speed must not exceed 5 miles per hour. When the trailer is to be transported any great distance, it is loaded onto a suitable carrier, usually a 2½-ton 6- by 6-truck, equipped with special loading and mounting equipment. Three lift jacks with special mount assemblies, two at the rear and one at the drawbar, permit quick removal of the wheels, and lowering of the body to the ground to afford the trailer a solid foundation for firing.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Mount M55:	
Overall width	6 ft, 10⅝ in.
Overall height:	
Wheels attached	5 ft, 3¼ in.
Wheels detached	4 ft, 8⅛ in.
Overall length	9 ft, 5⅝ in.
Maximum grade	60 percent
Maximum fording depth	1 ft, 6 in.
Angle of approach	10°
Angle of departure	20°
Mount M45C:	
Weight of mount (fully equipped)	(approx) 2,150 lb
Overall width	4 ft, 7 in.
Overall height	6 ft, 3 in.
Azimuth speed	0° to 60° per sec
Elevation speed	0° to 60° per sec
Power charger speed	2,600 to 2,900 rpm
Traverse	360°
Elevation	90°
Depression	10°
Trailer M20:	
Weight (approx)	800 lb
Width of tread (c to c)	5 ft
Ground clearance under body	7 in.
Height of drawbar lunette for max clearance	1 ft, 10½ in.
Tires:	
Size	22 x 7.25 x 11.50 in. (6 ply)
Type	aircraft, smooth contour tread
Inflation pressure	50 lb

EQUIPMENT

Sighting and Fire Control:*
Mount, sight (FSN 1290-767-6757).
Sight, reflex, M18.

Basic Issue Items: See ORD 7 SNL A-61.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box.

Length	6 ft, 11½ in.
Width	6 ft, ½ in.
Height	5 ft, 2½ in.
Volume	219 cu ft
Gross weight	3,420 lb
Ship tons	5.5

Outside Continental United States

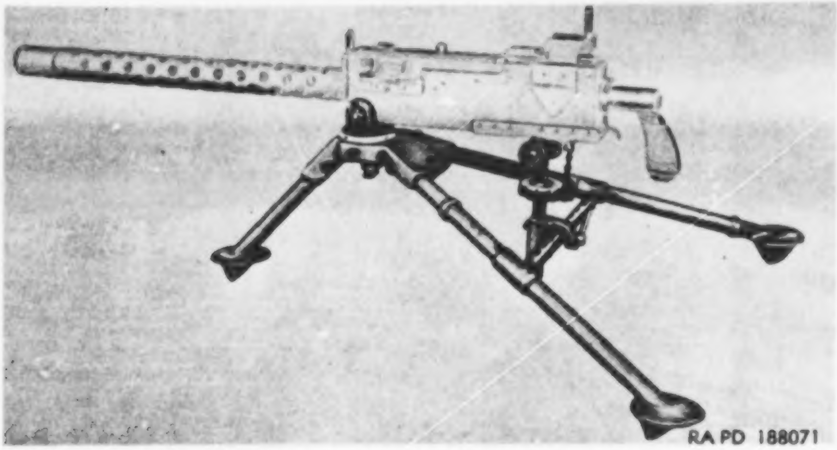
Shipped mount per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-61, TM 9-2010, TM 9-2205, TM 9-1005-209-34, TM 9-1005-209-50, FM 44-57.

* For characteristics and data, see item in section 14.

MOUNT, TRIPOD, MACHINEGUN: CALIBER .30, M2


RA PD 188071

Major item

Model	*Line item No.*	*Federal stock No.*
M2, w/e	4-25536-00	1005-322-9718

General

MOUNT, TRIPOD, MACHINEGUN: caliber .30, M2, is a lightweight portable, folding mount used for ground fire. It consists of three tubular steel legs joined in a tripod head, the two rear legs being joined and additionally supported by a traversing bar forming a simple A-truss and serving as a rear support for the elevating mechanism which in turn supports the mounted gun. The tripod head acts as a front support for the mounted gun and is in turn supported by the short front leg. MACHINEGUN, CALIBER .30: Browning M1919A4 flexible, is used primarily with this mount for ground fire; however, it can mount MACHINEGUN, CALIBER .30: Browning, M1917A1, M1919A4E1, M1919A6 or M37. This mount is stowed on various vehicles and tanks for possible ground use when conditions warrant.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	14 lb
Length:	
Extended	32.5 in.
Folded for transportation	27 in.
Spread of rear legs	30 in.
Traversing range:	
W/o releasing elevating mechanism	50°
Free	360° (6,400 mil)
Traversing bar graduated	800 mil
Elevating range:	
Free	21° to 45°
Mechanical	19° to 25°
Least increment	1 mil
Elevating handwheel graduated	1 mil

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-6.

INSTRUCTIONAL MATERIAL

For Graphic Training Aids and Devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 mounts per wood box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

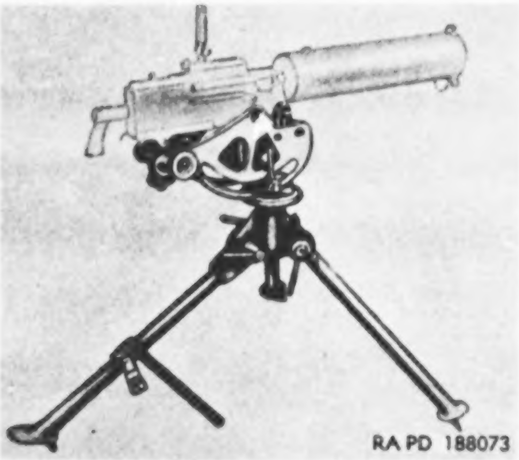
Outside Continental United States

Shipped 4 mounts per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-6, TM 9-2005, TM 9-2205, FM 23-55.

MOUNT, TRIPOD, MACHINEGUN: CALIBER .30, M1917A1


RA PD 188073

Major item

Model	*Line item No.*	*Federal stock No.*
M1917A1, w/e	4-25591-15	1005-673-4188

General

MOUNT, TRIPOD, MACHINEGUN: caliber .30, M1917A1, is a lightweight portable folding mount. This mount has as a central member a socket with three projecting lugs. Attached to these lugs are three legs which may be clamped independently in various positions. The cradle assembly seats in the socket and houses the elevating and traversing mechanism. Mount M1917A1 is intended primarily for machinegun, caliber .30: M1917A1, but can mount machinegun caliber .30: M1919A4, M1919A4E1, M1919A6, or M37.

Data plate location

Classification: Standard B (OTCM 36841).

Differences among models

CHARACTERISTICS

'eight	53.2 lb
Length:	
Extended	5 ft, 6 in.
Folded for transportation	3 ft
Spread of front legs extended	3 ft, 8 in.
Traversing range:	
Mechanical	50 mil
Least increment	1 mil
Free	6,400 mil (360°)
Traversing dial graduated	every 20 mil for 6,400 mil
Elevation	65°
Depression	28°
Elevating limits, mechanical range	50 mil
Elevating arc graduated	every 25 mil for 900 mil
Depression in cradle slots	(max) 500 mil (28°)
Depression within graduation on elevating arc	(max) 400 mil (22.5°)

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-5.

INSTRUCTIONAL MATERIAL

For Graphic Training Aids and Devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box.

Length	4 ft, 1⅝ in.
Width	10½ in.
Height	1 ft, ½ in.
Volume	3.8 cu ft
Gross weight	93 lb
Ship tons	0.09

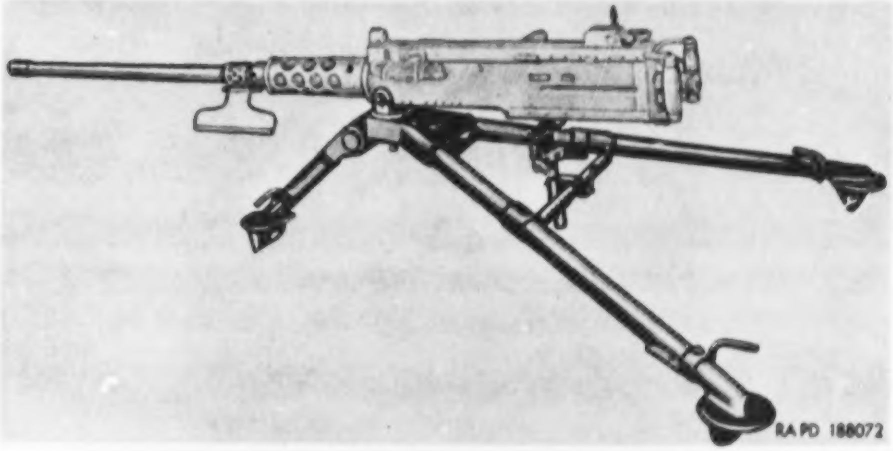
Outside Continental United States

Shipped mount per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-5, TM 9-2005, TM 9-2205, FM 23-55.

MOUNT, TRIPOD, MACHINEGUN: CALIBER .50, M3



RA PD 188072

Major item

Model	*Line item No.*	*Federal stock No.*
M3, w/e	4-35561-00	1005-322-9716

General

MOUNT, TRIPOD, MACHINEGUN: caliber .50, M3, is a lightweight portable folding mount. It consists of three telescoping tubular legs joined in a tripod head, the two rear legs being joined and additionally supported by a traversing bar. The traversing bar forms a single A-truss and serves as a rear support for the elevating mechanism which in turn supports the mounted gun. The tripod head furnishes a front support for the mounted gun, it being in turn supported by the short front leg. MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible, is used with this mount. By the addition of a spade grip backplate conversion group assembly, MACHINEGUN, CALIBER .50: Browning, AN-M2, aircraft, basic, can be used with this mount in an emergency. This mount is stowed on various vehicles and tanks for possible ground use when conditions warrant.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	44 lb
Length:	
Extended	6 ft, 2½ in.
Folded for transportation	3 ft, 9½ in.
Spread of rear legs	5 ft, 1½ in.
Height	
Traversing range:	
Without releasing elevating mechanism	45°
Free	360°
Traversing bar graduated	800 mil
Maximum elevation	5.6°
Maximum depression	14°
Least increment of elevation	1 mil

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-39.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box.

Length	4 ft, ⅝ in.
Width	10⅞ in.
Height	8⅝ in.
Volume	2.7 cu ft
Gross weight	80 lb
Ship tons	0.07

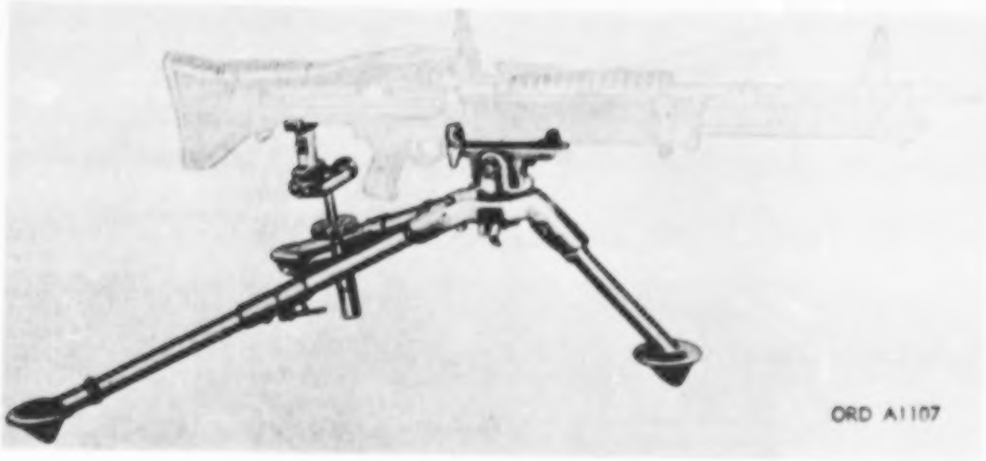
Outside Continental United States

Shipped 1 mount per wood box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-39, TM 9-2021, TM 9-2205.

MOUNT, TRIPOD, MACHINEGUN: 7.62-MM, M122



ORD A1107

Major item

Model	*Line item No.*	*Federal stock No.*
M122	4-25565-05	1005-710-5599

General

MOUNT, TRIPOD, MACHINEGUN: 7.62-mm, M122, is a lightweight, portable, folding mount, used for ground fire. It is composed of three main groups: the tripod, the elevating and traversing mechanism, and the pintle. The elevating and traversing mechanism has a quick-disconnect adapter which fastens to a plate beneath the receiver of the weapon. When released, the weapon may be traversed a full 360° and manually elevated or depressed. The pintle has a platform with a quick-disconnect latch which uncouples the weapon from the mount by pressing forward on the release latch. MACHINEGUN, 7.62 MILLIMETER: M60, is used with this mount.

Differences among models

Data plate location

Rear surface of head assembly.

Classification: Standard A (OTCM 37270).

CHARACTERISTICS

Weight	15 lb
Length:	
Extended	2 ft, 8½ in.
Folded for transportation	2 ft, 3 in.
Spread of rear legs	2 ft, 6 in.
Height	1 ft, 2 in.
Traversing range:	
Using traverse bar	50°
Free	360° (6,400 mils)
Traversing bar graduated	875 mils
Elevating range:	
Free	+21°, −45°
Without releasing elevating mechanism	+19°, −25°
Least increment	1 mil
Elevating handwheel graduated	1 mil

EQUIPMENT

Basic Issue Items: See TM 9-1005-224-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per shipping container

Length	2 ft, 7½ in.
Width	7⅜ in.
Height	6 in.
Volume	0.86 cu ft
Gross weight	25 lb
Ship tons	0.021

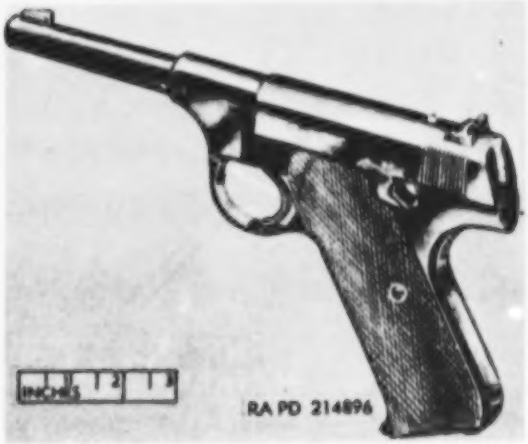
Outside Continental United States

Shipped 4 mounts per shipping container

Length	2 ft, 10⅜ in.
Width	1 ft, 4⅝ in.
Height	1 ft, 1⅝ in.
Volume	4.48 cu ft
Gross weight	129 lb
Ship tons	0.11

References: TM 9-1005-224-12, TM 9-1005-224-20P, TM 9-1005-224-34, TM 9-1005-224-34P.

PISTOL, CALIBER .22, AUTOMATIC: COLT, SUPER MODEL WOODSMAN, 4½-INCH BARREL



Major Item

Model	*Line item No.*	*Federal stock No.*
(as above)		1005-690-8220

General

PISTOL, CALIBER .22, AUTOMATIC: Colt, super model Woodsman, 4½-inch barrel, is a recoil-operated, air-cooled, magazine-fed, automatic loading hand weapon. The barrel is cylindrical. The front sight is adjustable for elevation and the rear sight is adjustable for windage. This weapon is identical to the standard model in appearance with the exception that it has a shorter barrel.

Differences among models

Data plate location

Data are located on the left and right sides of the pistol.

Classification: No type classification.

CHARACTERISTICS

Weight	1 lb, 11 oz
Length overall	8½ in.
Length of barrel	4½ in.
Rifling:	
Length	
Number of grooves	
Twist, -hand	
Operation	short recoil
Feed	magazine
Capacity of feeding device	10 rd
Type of front sight	blade (adjustable)
Type of rear sight	adjustable (windage)
Cooling	air
Trigger pull	

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (long rifle, lead bullet) (ctgs of different mfr may vary)	970 fps
Maximum range (long rifle ctg) (30° elevation)	1,500 yd

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 4⅝ in.
Width	11⅝ in.
Height	8¾ in.
Volume	1.7 cu ft
Gross weight	76 lb
Ship tons	0.04

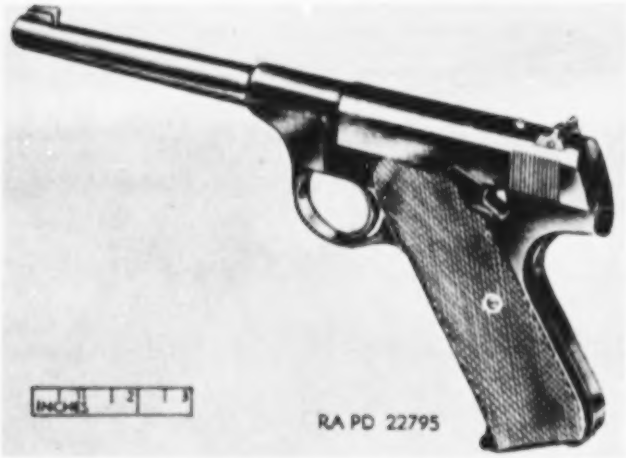
Outside Continental United States

Shipped 25 pistols per (VCI pack).

Length	2 ft, 4⅝ in.
Width	11⅝ in.
Height	8½ in.
Volume	1.7 cu ft
Gross weight	76 lb
Ship tons	0.04

References: FM 23-35.

PISTOL, CALIBER .22, AUTOMATIC: COLT, WOODSMAN, MATCH TARGET



RA PD 22795

Major item

Model	*Line item No.*	*Federal stock No.*
(as above)		1005-591-8045

General

PISTOL, CALIBER .22, AUTOMATIC: Colt, Woodsman target, is a recoil-operated, air-cooled, magazine-fed, semiautomatic hand weapon. Both of these weapons are identical in operation and functioning. These weapons are used for training purposes.

Differences among models

Data plate location

Data are located on right and left sides of the pistol.

Classification: No type classification.

CHARACTERISTICS

Weight	2 lb, 4 oz
Length overall	11 in.
Length of barrel	6⅝ in.
Rifling:	
Length	
Number of grooves	
Twist, -hand	
Operation	recoil
Feed	magazine
Capacity of feeding device	10 rd
Type of front sight	blade (fixed)
Type of rear sight	adjustable (windage and elevation)
Cooling	air
Trigger pull	

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (long rifle, lead bullet) (cartridges of different manufacture may vary)	970 fps
Maximum range (long rifle cartridge) (30° elevation)	1,500 yd

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	1 ft, 1⅝ in.
Height	8⅝ in.
Volume	2.1 cu ft
Gross weight	100 lb
Ship tons	0.05

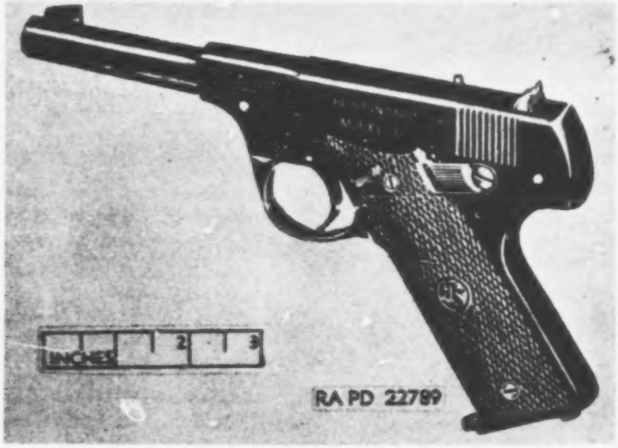
Outside Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	1 ft, 1⅝ in.
Height	8⅝ in.
Volume	2.1 cu ft
Gross weight	100 lb
Ship tons	0.05

References: SNL B-31, FM 23-35.

PISTOL, CALIBER .22, AUTOMATIC: HIGH STANDARD, MODEL B



Major item

Model	*Line item No.*	*Federal stock No.*
(as above)		1005-690-8220

General

PISTOL, CALIBER .22, AUTOMATIC: High Standard Model B is a recoil-operated, air-cooled, magazine-fed, automatic loading hand weapon. Both front and rear sights are fixed and the pistol is hammerless.

Differences among models

Data plate location

Data are located on the left and right sides of the pistol.

Classification: No type classification.

CHARACTERISTICS

Weight	1 lb, 15 oz
Length overall	8½ in.
Length of barrel	4½ in.
Rifling:	
Length	
Number of grooves	
Twist, left-hand	
Operation	recoil
Feed	magazine
Capacity of feeding device	10 rd
Type of front sight	fixed
Type of rear sight	fixed
Cooling	air
Trigger pull	

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (long rifle, lead bullet) (cartridges of different manufacture may vary)	970 fps
Maximum range (long rifle ctg) (30° elevation)	1,500 yd

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 7¼ in.
Width	11¼ in.
Height	8⅓ in.
Volume	1.8 cu ft
Gross weight	77 lb
Ship tons	0.05

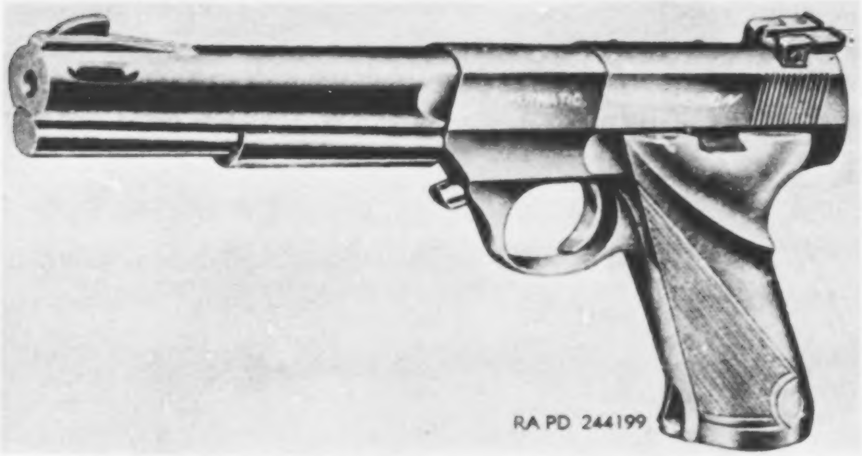
Outside Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL B-32, FM 23-35.

PISTOL, CALIBER .22, AUTOMATIC: HIGH STANDARD, SUPERMATIC (6¾-INCH BARREL)


RA PD 244199

Major item

Model	*Line item No.*	*Federal stock No.*
(as above)	4-29195-10	1005-317-2474

General

PISTOL, CALIBER .22, AUTOMATIC: high standard, supermatic is a 10-shot magazine-loaded hand weapon chambered for the caliber .22 long rifle cartridge only. The rear sight has a precision click adjustment for windage and elevation. The front sight is of the adjustable ramp type. The barrel has ports near its muzzle to stabilize it against muzzle jump. Weights of 2 to 5 ounces may be added to a dovetailed slot in the barrel to give balance to the pistol. A positive lock safety is provided which locks the sear in the safe position. A slide lock automatically holds the slide open after firing the last round in the magazine. Takedown of the barrel and the slide assembly is easily accomplished by depressing a barrel plunger cam. The trigger is of the serrated type for nonslip action and the grips are diamond checkered solid plastic.

Differences among models

Data plate location

Data are located on the left and right sides of the pistol.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	2 lb, 10 oz
Length overall	
Length of barrel	6¾ in.
Rifling:	
Length	
Number of grooves	6
Twist, right-hand	one turn in 16 in.
Operation	recoil
Feed	magazine
Capacity of feeding device	10 rd
Type of front sight	adjustable ramp
Type of rear sight	micrometer click sight
Cooling	air
Trigger pull	2½ to 3 lb

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (long rifle, lead bullet) (cartridges of different manufacture may vary).	970 fps
Maximum range (long rifle, ctg) (30° elevation)	1,500 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-49.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per wood box (VCI box).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

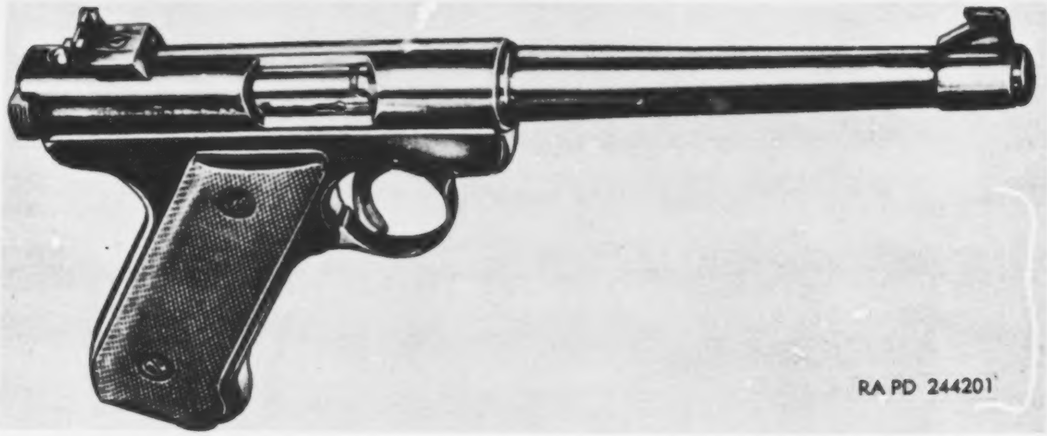
Outside Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL B-49, TM 9-1005-226-14.

PISTOL, CALIBER .22, AUTOMATIC: RUGER, MARK I (TARGET MODEL) (6⅞-INCH BARREL)



Model	*Major item* *Line item No.*	*Federal stock No.*
(as above)	4-29195-60	1005-736-7841

General

PISTOL, CALIBER .22, AUTOMATIC: Ruger, Mark I, is a 9-shot magazine-loaded hand weapon, chambered for the caliber .22 long rifle cartridge only. The "micro" rear sight is attached to the receiver and does not move with the recoil action of the weapon. The sight has precision click adjustment for windage and elevation. The front sight is a partridge style with a ⅛-inch wide blade. The bolt assembly which slides inside the receiver has serrated lugs used in initially cocking the weapon. A positive lock safety lever is provided which locks the sear in the safe position. It also can be used to lock the bolt in the rear position for chamber inspection. The trigger is of the serrated type for nonslip action. The grips are butaprene hard black gloss rubber with diamond checkering.

Differences among models

Data plate location

Data are located on the right and left sides of the pistol.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	2 lb, 10 oz
Length overall	10⅞ in.
Length of barrel	6⅞ in.
Rifling:	
Length	
Number of grooves	6
Twist, right-hand	one turn in 14 in.
Operation	recoil
Feed	magazine
Capacity of feeding device	9 rds
Type of front sight	partridge style
Type of rear sight	micrometer click
Cooling	
Trigger pull	2¼-3¼ lb

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (long rifle (40 grain)) (cartridges of different manufacture may vary)	970 fps
Maximum range (long rifle ctg) (30° elevation)	1,500 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-49.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	pistols per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

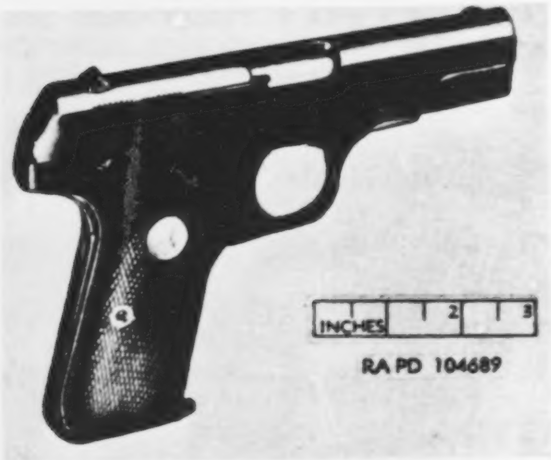
STORAGE AND SHIPMENT DATA

Outside Continental United States

Shipped	pistols per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL B-49. TM 9-1005-226-14.

PISTOL, CALIBER .32, AUTOMATIC: COLT



RA PD 104689

Major item

Model	*Line item No.*	*Federal stock No.*
(as above)	4-29220-10	1005-317-2469

General

PISTOL, CALIBER .32, AUTOMATIC: Colt is a light defensive hand weapon generally used for ranges of less than 100 yards. It is air-cooled, magazine-fed, recoil-operated, and automatic loading. During recoil the empty cartridge case is ejected; the pistol is then ready to be fired again by actuating the trigger. This pistol is similar in appearance to PISTOL, CALIBER .380, AUTOMATIC: Colt.

Differences among models

Data plate location

Data are located on the right and left sides of the pistol.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight (including magazine)	1 lb, 8 oz
Length overall	6¾ in.
Length of barrel	3¾ in.
Rifling:	
Length	
Number of grooves	
Twist, -hand	
Operation	short recoil
Feed	magazine
Capacity of feeding device	8 rd
Cooling	air

AMMUNITION

Type	ball (71 or 74 grain bullet)

PERFORMANCE

Muzzle velocity	980 fps
Maximum range	

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-35.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 4⅝ in.
Width	9½ in.
Height	8½ in.
Volume	1.4 cu ft
Gross weight	68 lb
Ship tons	0.04

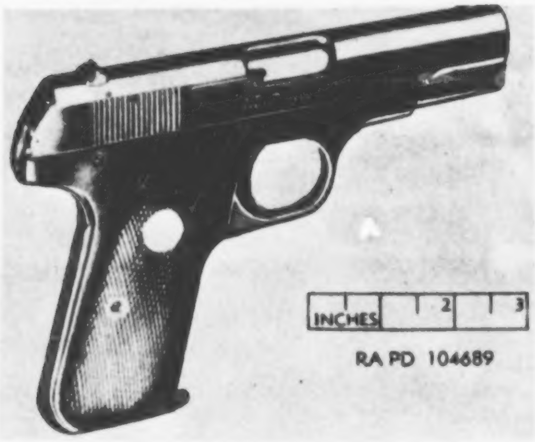
Outside Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 4⅝ in.
Width	9½ in.
Height	8½ in.
Volume	1.4 cu ft
Gross weight	68 lb
Ship tons	0.04

References: SNL B-35, FM 23-35, SB 9-125.

PISTOL, CALIBER .380, AUTOMATIC: COLT



Major item *Model*	*Line item No.*	*Federal stock No.*
(as above)		1005-317-2468

General

PISTOL, CALIBER .380, AUTOMATIC: Colt, is a light defensive hand weapon generally used for ranges of less than 100 yards. It is air-cooled, magazine-fed, recoil-operated, and automatic loading. During recoil, the empty cartridge case is ejected; the pistol is then ready to be fired again by actuating the trigger. This pistol is similar in appearance to PISTOL, CALIBER .32, AUTOMATIC: Colt.

Differences among models

Data plate location

Data are located on the left and right sides of the pistol.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight (including magazine)	1 lb, 8 oz
Length overall	6¾ in.
Length of barrel	3¾ in.
Rifling:	
Length	
Number of grooves	
Twist, -hand	
Operation	recoil
Feed	magazine
Capacity of feeding device	7 rd
Cooling	air

AMMUNITION

Type	ball (95-grain bullet) (9-mm short)

PERFORMANCE

Muzzle velocity	970 fps
Maximum range (30° elevation)	1,089 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-35.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 4¾ in.
Width	9½ in.
Height	8½ in.
Volume	1.4 cu ft
Gross weight	68 lb
Ship tons	0.04

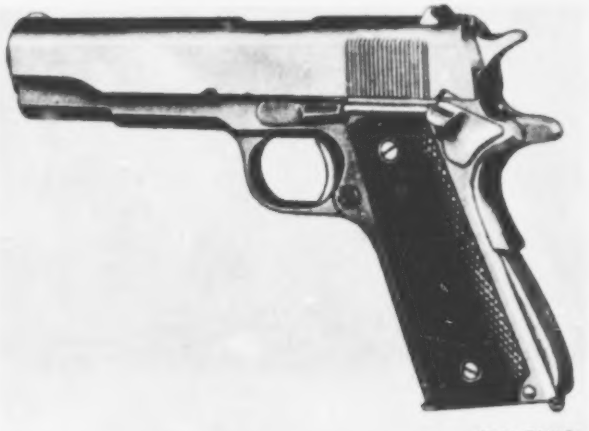
Outside Continental United States

Shipped 25 pistols per wood box (VCI pack).

Length	2 ft, 4¾ in.
Width	9½ in.
Height	8½ in.
Volume	1.4 cu ft
Gross weight	68 lb
Ship tons	0.04

References: SNL B-35, FM 23-35, SB 9-125.

PISTOL, CALIBER .45, AUTOMATIC: M1911A1 AND M1911A1 NATIONAL MATCH WITH 1961 IMPROVEMENTS AND M1911A1 NATIONAL MATCH WITH ADJUSTABLE REAR SIGHT WITH 1961 IMPROVEMENTS



ORD F2019

Major item

Model	*Line item No.*	*Federal stock No.*
M1911A1, w/e	4-29280-20	1005-673-7965
M1911A1, w/shoulder holster, w/e.	4-29280-31	1005-572-5097
M1911A1, national match, w/1961 improvements, w/e.	4-29281-20	1005-845-6124
M1911A1, national match, w/adj rear sight w/1961 improvements, w/e.		1005-738-3026

General

PISTOL, CALIBER .45, AUTOMATIC: M1911A1, is a light defensive hand weapon generally used for ranges of less than 100 yards. It is an air-cooled, magazine-fed, recoil-operated, and automatic loading. The gas pressure generated, when the cartridge is fired, forces the recoiling parts to the rear. During recoil, the empty cartridge case is ejected, the recoil spring compressed and the hammer cocked. When the recoil movement has been completed, the compressed recoil spring expands forcing the recoiling parts forward into battery chambering a round of ammunition, thereby placing the pistol in the "ready to fire" position. This pistol has an inertia type firing pin. National match weapons are specially selected for inherent accuracy during manufacture and conform to specific National Match Standards. They are used for all competitive matches held within the Army areas in the zones of interior and overseas.

Differences among models

The M1911A1 national match pistol with 1961 improvements is similar to the standard M1911A1 except that the national match has a lightweight long trigger with adjustable stops, higher front and rear sights, checked stocks and selected parts. One version has adjustable rear sight.

Data plate location

Classification: M1911A1—Standard A (OTCM 36841).

CHARACTERISTICS

Weight:
- W/o magazine .... 2 lb, 5 oz
- Magazine .... 2½ oz

Length:
- Overall .... 8⅝ in.
- Barrel .... 5 in.

Rifling:
- Length .... 4.118 in.
- Number of grooves 6
- Twist, left-hand .... one turn in 16 in.

Operation .... short recoil
Feed .... magazine
Capacity of feeding device .... 7 rd
Cooling .... air

Trigger pull:
- New or repaired .... 5½ to 6½ lb
- In hands of troops .... 5 to 6½ lb

AMMUNITION

Types .... ball, tracer, blank, and dummy

PERFORMANCE

Muzzle velocity (ball, 231- or 234-grain bullet) .... 830 fps
Maximum range (ball) (30° elevation) .... 1,640 yd

EQUIPMENT

Basic Issue Items: M1911A1 .... See TM 9-1005-211-12P/2.
M1911A1 National Match .... See TM 9-1005-211-12P/1.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .45 DUMMY: M1921.
For Graphic Training Aids and Devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

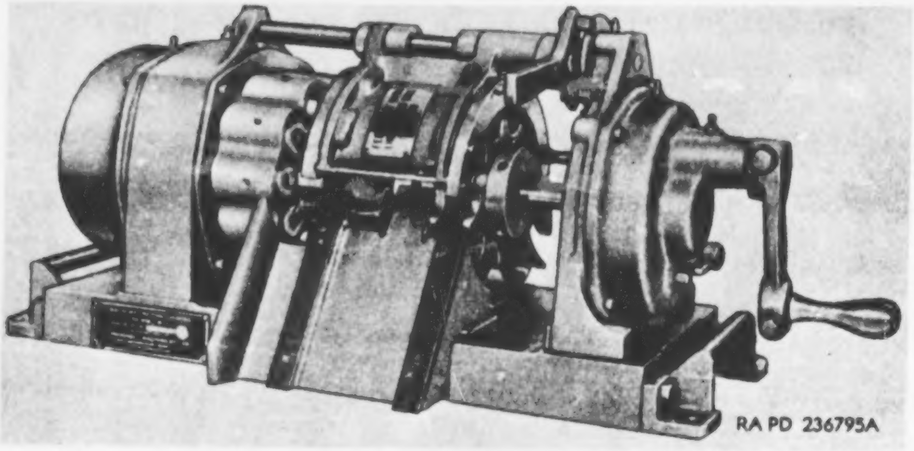
Within and Outside Continental United States

Shipped 25 pistols per wood box (VCI pack).

- Length .... 2 ft, 9¾ in.
- Width .... 11¾ in.
- Height .... 10⅝ in.
- Volume .... 2.8 cu ft
- Gross weight .... 93 lb
- Ship tons 0.06

References: TM 9-1005-211-12P/1, TM 9-1005-211-12P/2, TM 9-1005-211-35P, TM 9-1295, TM 9-2951-1, FM 23-35.

REPOSITIONER, 20-MILLIMETER, M17



RA PD 236795A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M17		1005-730-7594

General

REPOSITIONER, 20-mm, M17, is a small, lightweight, hand-operated machine used to accurately reposition rounds in disintegrating belts composed of M3, M7, M8, or M10 links.

Differences among models

Data plate location

The identification plate is located on the front of the base assembly. It includes the name, model number, serial number of the repositioner, and the name and address of the manufacturer. An instruction plate is mounted on the infeed top guide assembly.

Classification: Standard (for U.S. Air Force use only) (OTCM 36841).

CHARACTERISTICS

Net weight	84 lb
Length	2 ft, 4 in.
Width	1 ft, 6 in.
Height	1 ft, 7 in.
Links used	M3, M7, M8, and M10

PERFORMANCE

Normal operating speed	200 rd per min

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped repositioners per

Length	2 ft, 4 in.
Width	1 ft, 6 in.
Height	
Volume	
Gross weight	115 lb
Ship tons	

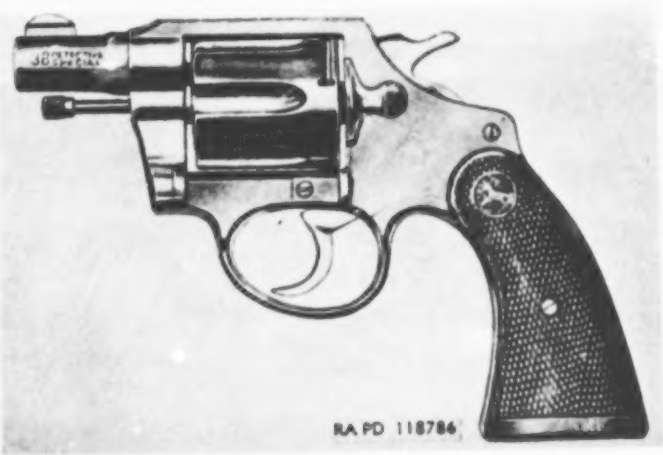
Outside Continental United States

Shipped repositioners per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-73, Sec. 2; TM 9-9204-1.

REVOLVER, CALIBER .38: COLT, DETECTIVE SPECIAL, 2-INCH BARREL



Major item

Model	*Line item No.*	*Federal stock No.*
(as above) w/hip holster	4-35881-05	1005-840-7302
(as above) w/shoulder holster	4-35881-06	1005-699-1678

General

REVOLVER, CALIBER .38: Colt, detective special, 2-inch barrel, is a single shot, breech loading, hand weapon. It functions either single or double action and has a swing-out type cylinder which holds six cartridges.

Differences among models

Data plate location

Data are stamped on the left side of the barrel.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	1 lb, 5 oz
Length overall	6⅝ in.
Length of barrel	2 in.
Rifling:	
Length	
Number of grooves	6
Twist, left-hand	one turn in 16 in.
Number of chambers	6
Type of front sight	blade (fixed)
Type of rear sight	groove (fixed)
Cooling	air

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (ball, 158-grain bullet)	870 fps
Maximum range (ball) (30° elevation)	(approx) 950 yd
Maximum effective range	50 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-29.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	2 ft, 7¼ in.
Width	10 in.
Height	11 in.
Volume	2.0 cu ft
Gross weight	67 lb
Ship tons	0.05

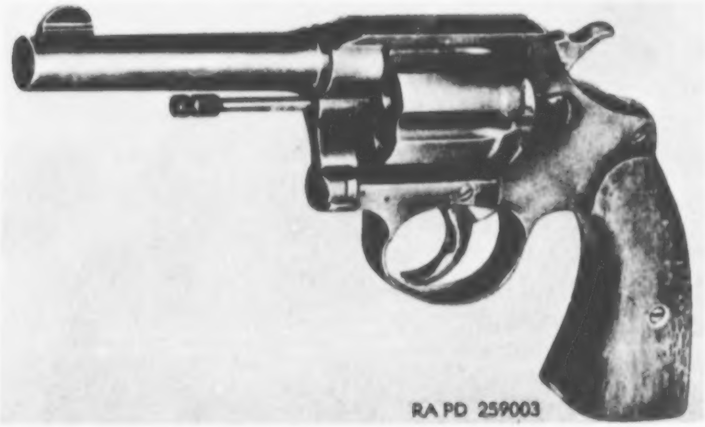
Outside Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	2 ft, 7¼ in.
Width	10 in.
Height	11 in.
Volume	2.0 cu ft
Gross weight	67 lb
Ship tons	0.05

References: SNL B-29, TM 9-2205, FM 23-35, SB 9-112.

REVOLVER, CALIBER .38: COLT, POLICE POSITIVE SPECIAL, 4-INCH BARREL



	Major item	
Model	*Line item No.*	*Federal stock No.*
(as above) w/e	4-35840-05	1005-817-2464

General

REVOLVER, CALIBER .38: Colt, police positive special, 4-inch barrel, is a light defensive hand weapon generally used for ranges of less than 100 yards. It has a solid frame, fixed sights, and a swing-out type cylinder which holds six cartridges.

Differences among models

Data plate location

Data are stamped on the left side of the barrel.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	1 lb, 6 oz
Length:	
Overall	8¾ in.
Barrel	4 in.
Rifling:	
Length	
Number of grooves	
Twist, right-hand	
Number of chambers	6
Type of front sight	fixed
Type of rear sight	fixed
Cooling	
Trigger pull	

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (ball, 158-grain bullet)	870 fps
Maximum range (ball) (30° elevation)	1,085 yd

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

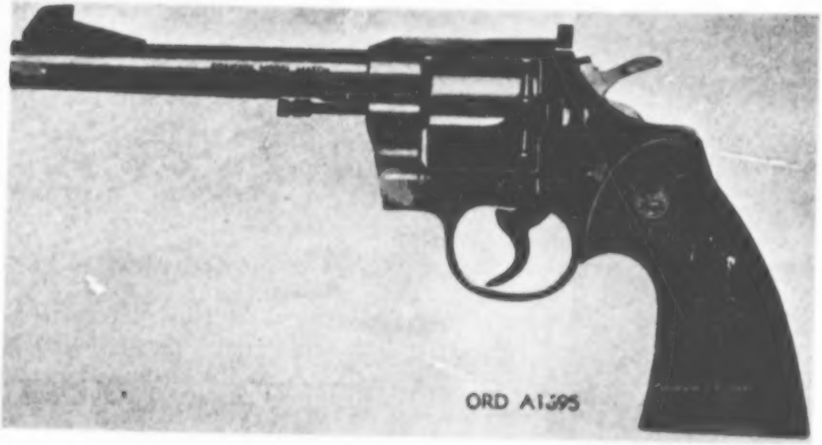
Outside Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SB 9-112, TM 9-2205.

REVOLVER, CALIBER .38: COLT, SPECIAL OFFICER'S MODEL, SHORT ACTION, NATIONAL MATCH GRADE



Major item

Model	*Line item No.*	*Federal stock No.*
(as above) w/o	4–88775–00	1005–690–8762

General

REVOLVER, CALIBER .38: Colt, special officer's model, short action, national match grade, is used for target practice. It has a rear sight which is adjustable for elevation and windage, a front sight of a ramp type, a heavy barrel, and a wide spur hammer.

Differences among models

Data plate location

Classification: No type classification.

CHARACTERISTICS

Weight .... 39 oz
Length overall .... 11¼ in.
Length of barrel .... 6 in.
Rifling:
  Length ....
  Number of grooves ....
  Twist, -hand ....
Number of chambers 6
Type of front sight .... ramp fixed blade
Type of rear sight .... adjustable
Cooling ....

AMMUNITION

Types .... .38 Special (midrange, regular and high speed loads, including .38-44).

PERFORMANCE

Muzzle velocity ....
Maximum range ....

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped revolves per

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

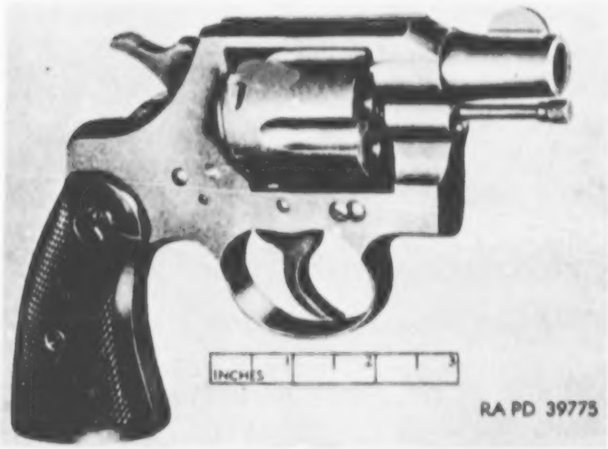
Outside Continental United States

Shipped revolves per

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: Not printed.

REVOLVER, CALIBER .38: COLT, SPECIAL, OFFICIAL POLICE, 2- AND 4-INCH BARREL



Model	*Major item* *Line item No.*	*Federal stock No.*
(as above) 2-inch barrel, w/hip holster.	4-35831-10	1005-214-0933
(as above) 2-inch barrel, w/shoulder holster.	4-35831-11	1005-699-1679
(as above) 4-inch barrel, w/hip holster.	4-35840-10	1005-214-0932
(as above) 4-inch barrel, w/shoulder holster.	4-35840-11	1005-699-1680

General

REVOLVER, CALIBER .38: Colt, special, official police, 2- and 4-inch barrel, is light defensive hand weapon generally used for ranges of less than 100 yards. They function either single or double action and have a swing-out type cylinder which holds six cartridges.

Differences among models

The only difference between the two models is in the length of the barrel.

Data plate location

Data are stamped on the left side of the barrel.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
(2-in. barrel)	1 lb, 5 oz
(4-in. barrel)	1 lb, 6 oz
Length overall:	
(2-in. barrel)	6¾ in.
(4-in. barrel)	8¾ in.
Rifling:	
Length	
Number of grooves	
Twist, -hand	
Number of chambers	6
Type of front sight	blade (fixed)
Type of rear sight	groove (fixed)
Cooling	air

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (4-inch barrel) (ball, 158-grain bullet)	870 fps
Maximum range (ball) (30° elevation)	(approx) 1,085 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-29

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers (2-in. barrel) per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	10 in.
Height	11 in.
Volume	2.0 cu ft
Gross weight	63 lb
Ship tons	0.05

Shipped 25 revolvers (4-in. barrel) per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	11⅝ in.
Height	11 in.
Volume	2.4 cu ft
Gross weight	65 lb
Ship tons	0.06

Outside Continental United States

Shipped 25 revolvers (2-in. barrel) per wood box (VCI pack).

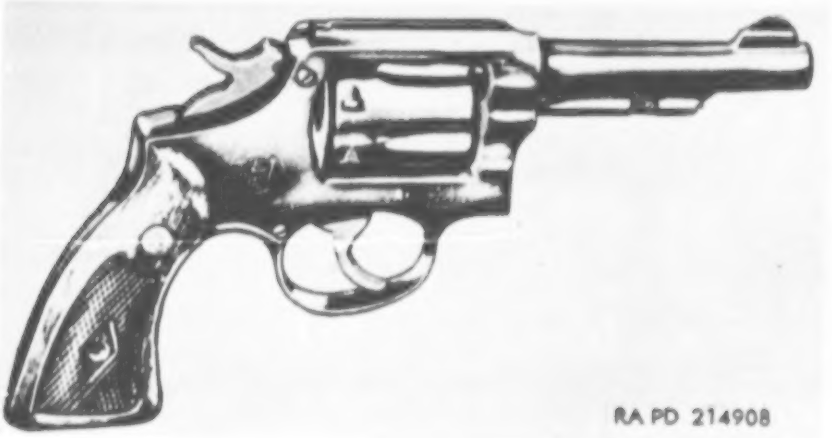
Length	2 ft, 7⅛ in.
Width	10 in.
Height	11 in.
Volume	2.0 cu ft
Gross weight	63 lb
Ship tons	0.05

Shipped 25 revolvers (4-in. barrel) per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	11⅝ in.
Height	11 in.
Volume	2.4 cu ft
Gross weight	65 lb
Ship tons	0.06

References: SNL B-29, TM 9-2205, FM 23-35, SB 9-112.

REVOLVER, CALIBER .38: SMITH AND WESSON, MILITARY AND POLICE (SHORT ACTION), 2- AND 4-INCH BARREL


RA PD 214908

Model	*Major item* *Line item No.*	*Federal stock No.*
(as above) 2-inch barrel, w/hip holster.	4–35831–30	1005–840–7806
(as above) 4-inch barrel, w/hip holster, w/e.	4–35840–30	1005–840–7807
(as above) 4-inch barrel, w/shoulder holster, w/e.	4–35840–31	1005–699–1681

General

REVOLVER, CALIBER .38: Smith and Wesson, military and police (short action), 2- or 4-inch barrel, is a light defensive hand weapon generally used for ranges of less than 100 yards. It functions either single or double action and has a swing-out type cylinder which holds six cartridges. The short action model was redesigned for the purpose of reducing the length of hammer travel, thereby speeding up lock time and making it easier and faster to cock the gun in single action firing. This was accomplished by relocating the hammer stud and redesigning the hammer, sideplate, frame, and other components with the exception of the location of the trigger.

Differences among models

The only difference between these models is in the length of the barrel.

Data plate location

Data are stamped on the right side of the barrel and frame.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	1 lb, 14⅛ oz
Length overall	9⅛ in.
Height overall	5 in.
Width overall	1 15/16 in.
Length of barrel	4 in.
Number of chambers	6

Rifling:	
Length	
Number of grooves	5
Twist, right-hand	
Type of front sight	fixed
Type of rear sight	adjustable
Trigger pull:	
Single action	3–5 lb
Double action	(max) 14 lb

AMMUNITION

Types	ball

PERFORMANCE

Muzzle velocity (ball, 158 grain bullet)	760 fps
Maximum range (ball) (30° elevation)	(approx) 1,085 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B–29.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	11⅝ in.
Height	11 in.
Volume	2.4 cu ft
Gross weight	74.5 lb
Ship tons	0.06

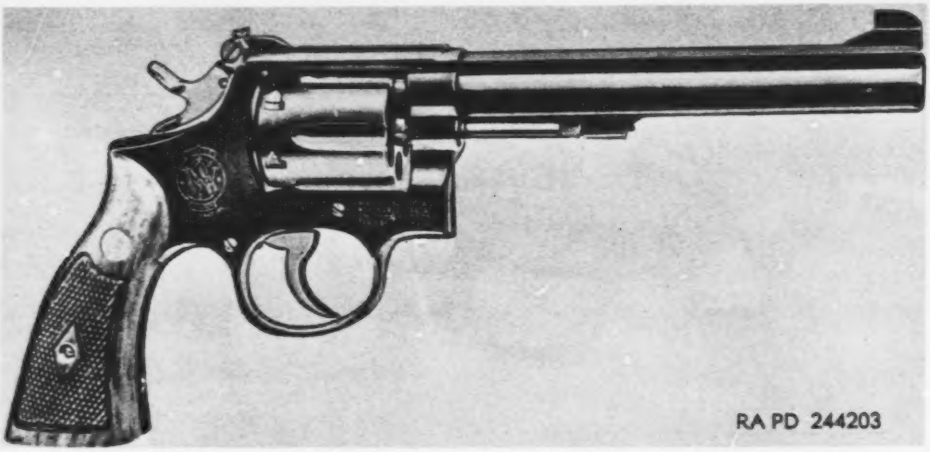
Outside Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	11⅝ in.
Height	11 in.
Volume	2.4 cu ft
Gross weight	74.5 lb
Ship tons	0.06

References: SNL B–29, TM 9–2205, FM 23–35, SB 9–112.

REVOLVER, CALIBER .38: SMITH AND WESSON, SPECIAL, K-38 (MASTERPIECE)


RA PD 244203

	Major item	
Model	*Line item No.*	*Federal stock No.*
K-38, w/e	4-35791-00	1005-568-8704

General

REVOLVER, CALIBER .38: Smith and Wesson, special, K-38 (Masterpiece), is a 6-shot breech-loading hand weapon. It has a solid frame, a swingout cylinder with six chambers and a manual ejector. The cylinder, mounted on a yoke assembled to the front of the frame, swings out when released by the thumbpiece. The cylinder is unloaded by pressure on the ejector rod which passes down the central axis of the cylinder. Spring loading returns the ejector rod to its original position. This revolver is a selective-double-action type or single action type. There is a built-in safety which prevents firing except by pull on the trigger. The front sight is ⅛- or 1/10-inch wide plain partridge style. The rear sight has micrometer click adjustments for windage and elevation. The grips are walnut wood with diamond checkering. The hammer spur and trigger are knurled.

Differences among models

Data plate location

Data are stamped on the right and left side of the barrel and on the right side of the frame.

Classification: No type classification.

CHARACTERISTICS

Weight (loaded)	2 lb, 6½ oz
Length overall	11⅛ in.
Length of barrel	6 in.
Rifling:	
Length	
Number of grooves	5
Twist, right-hand	one turn in 18¾ in.
Number of chambers	6
Type of front sight	plain partridge
Type of rear sight	micrometer click
Cooling	
Trigger pull:	
Single action	2½ to 3½ lb
Double action	12 to 14 lb

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (ball, midrange, 146-grain bullet)	fps
Maximum range (ball, midrange, 146-grain bullet)	yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-29.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

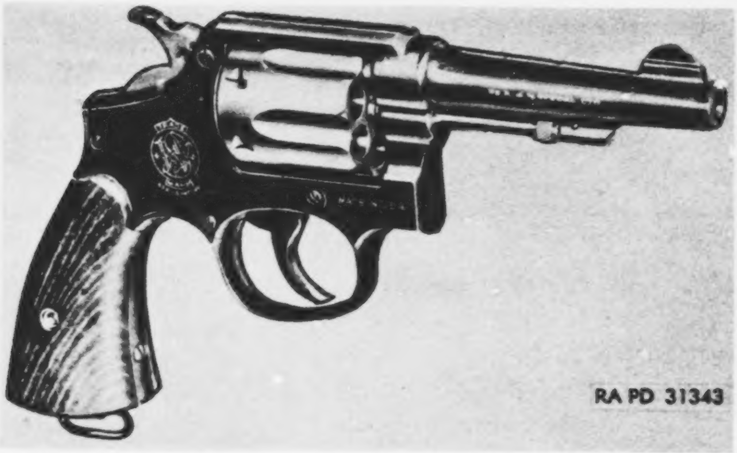
Outside Continental United States

Shipped 25 revolvers per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL B-29, TM 9-1005-226-14, SB 9-112.

REVOLVER, CALIBER .38: SMITH AND WESSON, SPECIAL, MILITARY AND POLICE, 2- AND 4-INCH BARREL



	Major item	
Model	*Line item No.*	*Federal stock No.*
Revolver (as above), 2-inch barrel, w/hip holster.	4–35831–20	1005–840–7303
Revolver (as above), 2-inch barrel, w/shoulder holster.	4–35831–36	1005–699–1688
Revolver (as above), 4-inch barrel, w/hip holster.	4–35840–20	1005–214–0934
Revolver (as above), 4-inch barrel, w/shoulder holster.	4–35840–21	1005–699–1685

General

REVOLVER, CALIBER .38: Smith and Wesson, special, military and police, 2- and 4-inch barrel, are light defensive hand weapons generally used for ranges of less than 100 yards. They function either single or double action and have a swing-out type cylinder which holds six cartridges. This revolver can be identified by the ".38 S&W Special CTG." on the barrel.

Differences among models

The only difference between these models is in the length of the barrel.

Data plate location

Data are stamped on the right, left sides and top of the barrel and frame.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:
  (2-in. barrel) .... 1 lb, 8 oz
  (4-in. barrel .... 1 lb, 12 oz
Length overall:
  (2-in. barrel) .... 7⅛ in.
  (4-in. barrel) .... 9⅛ in.
Number of chambers 6
Type of front sight .... blade (fixed)
Type of rear sight .... groove (fixed)
Cooling .... air

AMMUNITION

Type .... ball

PERFORMANCE (4-in. barrel)

(4-in. barrel)
Muzzle velocity (ball, 158-grain bullet) .... 760 fps
Maximum range (ball) (30° elevation) .... (approx) 1,085 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B–29.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers, 2-inch barrel per wood box (VCI pack).
  Length .... 2 ft, 7¼ in.
  Width .... 10⅞ in.
  Height .... 10⅝ in.
  Volume .... 2.1 cu ft
  Gross weight .... 70 lb
  Ship tons 0.05

Shipped 25 revolvers, 4-inch barrel per wood box (VCI pack).
  Length .... 2 ft, 7¼ in.
  Width .... 11⅝ in.
  Height .... 11 in.
  Volume .... 2.4 cu ft
  Gross weight .... 74.5 lb
  Ship tons 0.06

Outside Continental United States

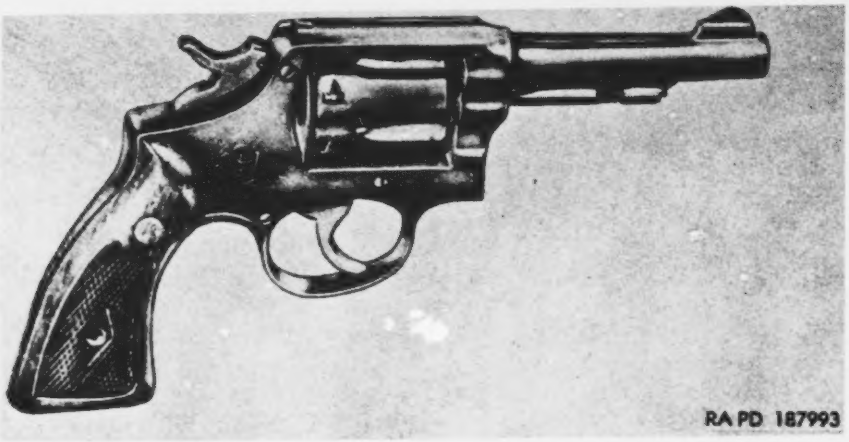
Shipped 25 revolvers, 2-inch barrel per wood box (VCI pack).
  Length .... 2 ft, 7¼ in.
  Width .... 10⅞ in.
  Height .... 10⅝ in.
  Volume .... 2.1 cu ft
  Gross weight .... 70 lb
  Ship tons 0.05

Shipped 25 revolvers, 4-inch barrel per wood box (VCI pack).
  Length .... 2 ft, 7¼ in.
  Width .... 11⅝ in.
  Height .... 11 in.
  Volume .... 2.4 cu ft
  Gross weight .... 74.5 lb
  Ship tons 0.06

References: SNL B–29, TM 9–2205, FM 23–35.

best copy available

REVOLVER, CALIBER .38: SMITH AND WESSON, SPECIAL, MILITARY AND POLICE (SHORT ACTION), 2- AND 4-INCH BARREL



Model	*Major item* *Line item No.*	*Federal stock No.*
(as above), 2-inch barrel, w/shoulder holster.	4-35831-87	1005-699-1684
(as above), 4-inch barrel, w/hip holster.	4-35840-40	1005-840-7304
(as above), 4-inch barrel, w/shoulder holster.	4-35840-41	1005-699-1686

General

REVOLVER, CALIBER .38: Smith and Wesson, special, military and police (short action), 2- and 4-inch barrel, are light defensive hand weapons generally used for ranges of less than 100 yards. They function either single or double action and have a swing-out type cylinder which holds six cartridges. The short action model was redesigned for the purpose of reducing the length of hammer travel, thereby speeding up lock time and making it easier and faster to cock the gun in single action firing. This was accomplished by relocating the hammer stud and redesigning the hammer, sideplate, frame, and other components with the exception of the location of the trigger. These weapons differ from the caliber .38 short action Smith and Wesson 4-inch barrel revolver in that they are chambered for the special caliber .38 cartridge.

Differences among models

The only difference between these models is in the length of the barrel.

Data plate location

Data are stamped on the right side of the barrel and frame.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
(2-in. barrel)	1 lb, 12 oz
(4-in. barrel)	1 lb, 14 oz
Length overall:	
(2-in. barrel)	7⅛ in.
(4-in. barrel)	9⅛ in.
Height overall	5 in.
Width overall	$1\frac{15}{16}$ in.
Rifling:	
Length	
Number of grooves	5
Twist, right-hand	
Type of front sight	fixed
Type of rear sight	adjustable

Trigger pull:	
Single action	3-5 lb
Double action	(max) 14 lb

AMMUNITION

Type	ball

PERFORMANCE (4-in. barrel)

Muzzle velocity (ball, 150-grain bullet)	760 fps
Maximum range (ball) (30° elevation)	(approx) 1,085 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-29.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 revolvers, 2-inch barrel, per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	10⅞ in.
Height	10⅝ in.
Volume	2.1 cu ft
Gross weight	70 lb
Ship tons	0.05

Shipped 25 revolvers, 4-inch barrel, per wood box (VCI pack).

Length	2 ft, 7⅛ in.
Width	11⅝ in.
Height	11 in.
Volume	2.4 cu ft
Gross weight	74.5 lb
Ship tons	0.06

Outside Continental United States

Shipped revolvers, 2-inch barrel, per

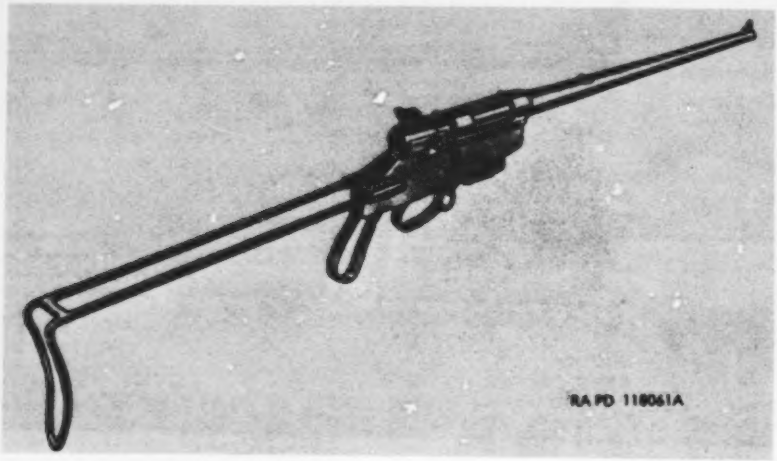
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped revolvers, 4-inch barrel, per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL B-29, TM 9-2205, FM 23-35.

RIFLE, CALIBER .22: SURVIVAL, M4 (T38) (HORNET CARTRIDGE)



Model	*Line item No.*	*Federal stock No.*
M4		1005-575-0070

General

RIFLE, CALIBER .22: survival, M4, is for use by Air Force personnel for the procurement of food when such personnel are forced down in uninhabited or hostile territory. It is basically a bolt action, repeating weapon firing the cal. .22 Hornet cartridge. It is equipped with a stamped metal receiver casing and has a collapsible wire stock. The barrel is removable from the weapon for packing purposes. The rifle is equipped with a receiver-mounted peep rear sight and a blade type front sight.

Differences among models

Data plate location

Data are located on the barrel, receiver, and frame.

Classification: Standard B.

CHARACTERISTICS

Weight	4 lb
Length overall	2 ft, 8⅛ in.
Feed	magazine
Length of barrel	13⅝ in.
Capacity of feeding device	4 rd
Type of action	bolt-action, repeating, nonautomatic

AMMUNITION

Type	ball (45-grain soft point bullet)

PERFORMANCE

Muzzle velocity	2,690 fps
Maximum effective range	50 yd

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL B-43.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 rifles per wood box (VCI pack).

Length	1 ft, 9½ in.
Width	1 ft, 5½ in.
Height	1 ft, 2½ in.
Volume	3.2 cu ft
Gross weight	125 lb
Ship tons	0.08

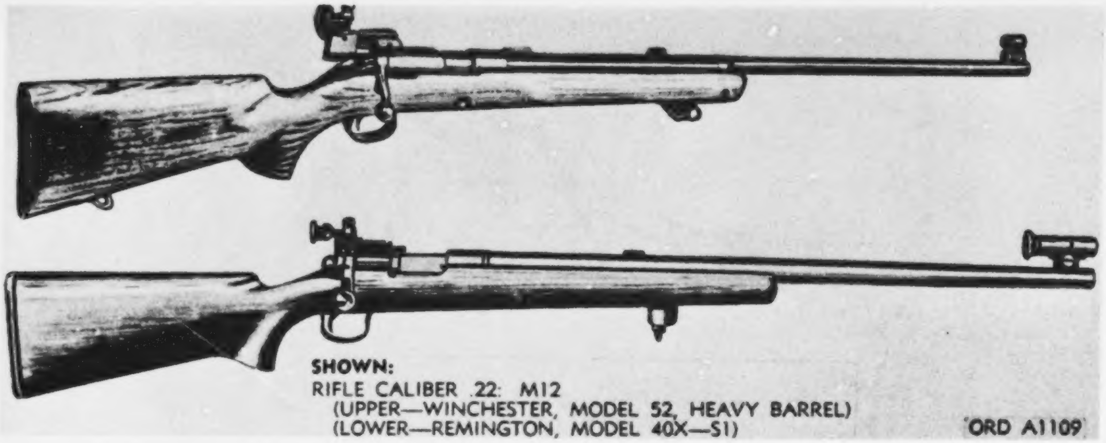
Outside Continental United States

Shipped rifles per wood box (VCI pack).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL B-43. TB ORD 389.

RIFLE, CALIBER .22: M12 (WINCHESTER MODELS 52 STANDARD, 52 HEAVY BARREL, 52B AND 52C; REMINGTON MODEL 40X–S1)



SHOWN:
RIFLE CALIBER .22: M12
(UPPER—WINCHESTER, MODEL 52, HEAVY BARREL)
(LOWER—REMINGTON, MODEL 40X—S1)

ORD A1109

Major Item

Model	*Line item No.*	*Federal stock No.*
52 Standard, w/e	4-35996-30	1005-317-2473
52 Heavy barrel, w/e	4-35996-40	1005-317-2472
52B	4-35996-50	1005-736-7845
52C	4-35996-52	1005-829-6785
40X-S1, w/e	4-35996-20	1005-694-4123

General

RIFLE, CALIBER .22: M12 designates commercial rifles classified for match competition and includes the Winchester Models 52 Standard, 52 Heavy Barrel, 52B and 52C, and Remington Model 40X-S1. The rear sight is a micrometer type adjustable for both windage and elevation. The hooded front sight is furnished with several types of removable inserts ranging from a post to a cross-hair. Provisions for mounting a telescope are provided.

Differences among models

Primarily the difference between models of the Winchester model 52 series is in the weight of the barrels and type of firing mechanisms. They are 5-shot magazine-loaded repeating rifles while the Remington model 40X-S1 is a single shot weapon with loading platform. On the Winchester, the safety lock is located at the front of the bolt locking handle while on the Remington the safety lock is located at the top rear of the bolt.

Data plate location

Data is located on the receiver and barrel of the heavy barrel Winchester and on the receiver of the standard model Winchester and Remington.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Winchester, 52 Standard	10 lb
Winchester, 52 Heavy Barrel	12 lb
Winchester, 52B	
Winchester, 52C	
Remington	10 lb, 12 oz
Length overall:	
Winchester (all models)	3 ft, 9$\frac{13}{16}$ in.
Remington	3 ft, 10$\frac{3}{4}$ in.
Length of barrel	2 ft, 4 in.
Rifling:	
Length:	
Winchester, 52 Standard	
Winchester, 52 Heavy Barrel	2 ft, 2$\frac{3}{4}$ in.
Winchester, 52B	
Winchester, 52C	
Remington	
Number of lands and grooves	6
Twist, right-hand	one turn in 16 in.
Operation	manual
Feed:	
Winchester	Optional (magazine or single shot using single shot adapter).
Remington	single shot (hand-loaded)
Capacity of feeding device:	
Winchester	5 rd
Remington	1 rd
Type of front sight	hooded, interchangeable inserts
Type of rear sight	micrometer
Cooling	air

AMMUNITION

Types:	
Winchester, 52 Standard	ball, long rifle or short (40- or 29-grain bullet).
Winchester, 52 Heavy Barrel	ball, long rifle (40-grain bullet)
Winchester, 52B	
Winchester, 52C	

PERFORMANCE

Muzzle velocity (ball, long rifle (40-grain bullet))	1,100 fps
Maximum range (long rifle ctg)	1,500 fps

EQUIPMENT

Basic Issue Items: See TM 9-1005-206-14P/4.

INSTRUCTIONAL MATERIAL STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 rifles per wood shipping container.

Length	4 ft, 4 in.
Width	1 ft, 9$\frac{5}{8}$ in.
Height	1 ft, 4$\frac{1}{2}$ in.
Volume	10.5 cu ft
Gross weight	210 lb
Ship tons	0.26

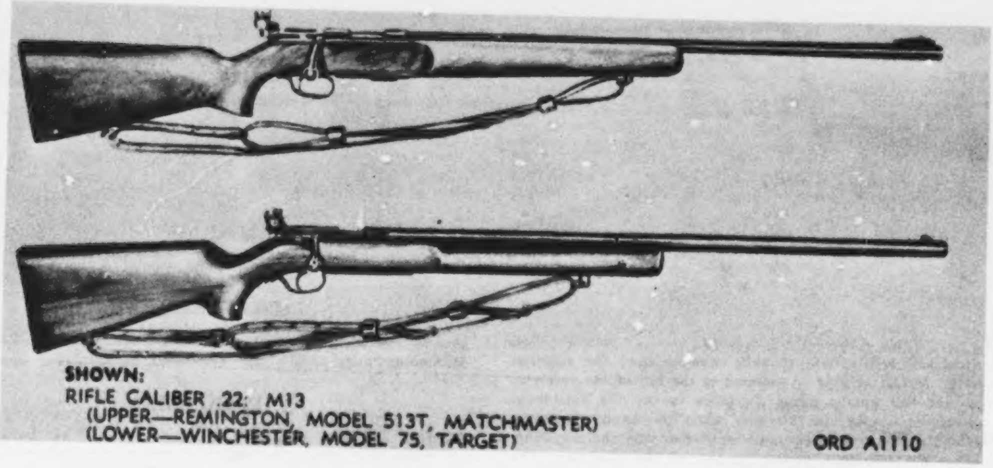
Outside Continental United States

Shipped 10 rifles per wood shipping container.

Length	4 ft, 4 in.
Width	1 ft, 9$\frac{5}{8}$ in.
Height	1 ft, 4$\frac{1}{2}$ in.
Volume	10.5 cu ft
Gross weight	210 lb
Ship tons	0.26

References: TM 9-1005-206-14P/4, TM 9-1005-226-14.

RIFLE, CALIBER .22: M13 (WINCHESTER MODEL 75, TARGET; REMINGTON MODEL 513T, MATCHMASTER)



SHOWN:
RIFLE CALIBER .22: M13
(UPPER—REMINGTON, MODEL 513T, MATCHMASTER)
(LOWER—WINCHESTER, MODEL 75, TARGET)
ORD A1110

Major Item

Model	*Line item No.*	*Federal stock No.*
75, w/e	4-35994-40	1005-317-2471
513T, w/e	4-35994-20	1005-840-3758

General

RIFLE, CALIBER .22: M13 designates commercial rifles classified for training purposes and includes the Winchester target rifle model 75 and the Remington matchmaster rifle model 513T. They are magazine-fed, manually-operated, bolt action, shoulder weapons. The rear sight is a micrometer type adjustable for both windage and elevation and the front sight is the fixed blade type.

Differences among models

The Winchester model 75 has a magazine containing 5 rounds of ammunition and a short fixed blade-type front sight.

The Remington model 513T has a magazine containing 6 rounds of ammunition and a long fixed blade-type front sight.

Data plate location

Data are located on top of the receiver.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight (w/o equipment):	
Winchester	7 lb, 8 oz
Remington	8 lb, 3 oz
Length overall	3 ft, 9 in.
Length of barrel:	
Winchester	2 ft, 4⅛ in.
Remington	2 ft, 3 in.
Operation	manual
Feed	magazine
Capacity of feeding device:	
Winchester	5 rd
Remington	6 rd
Type of front sight	fixed blade
Type of rear sight	adjustable
Cooling	air
Rifling:	
Length:	
Winchester	2 ft, $3\frac{5}{16}$ in.
Remington	2 ft, 2¼ in.
Number of lands and grooves	6
Twist, right-hand	one turn in 16 in.

AMMUNITION

Type	ball (long rifle, 40-grain bullet)

PERFORMANCE

Muzzle velocity	1,100 fps
Maximum range (long rifle ctg) (30° elevation)	1,500 yd

EQUIPMENT

Basic Issue Items: See TM 9-1005-206-14P/4.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 rifles per wood shipping container.

Length	4 ft, 4 in.
Width	1 ft, 9⅝ in.
Height	1 ft, 4½ in.
Volume	10.5 cu ft
Gross weight	210 lb
Ship tons	0.26

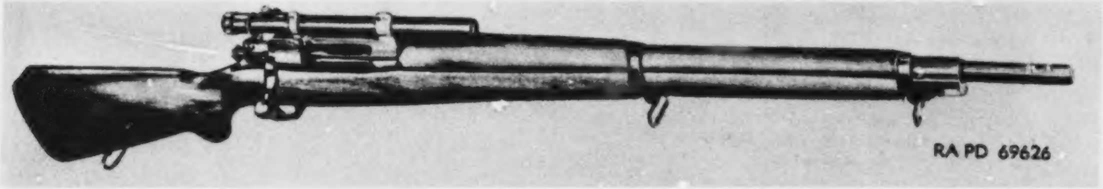
Outside Continental United States

Shipped 10 rifles per wood shipping container.

Length	4 ft, 4 in.
Width	1 ft, 9⅝ in.
Height	1 ft, 4½ in.
Volume	10.5 cu ft
Gross weight	210 lb
Ship tons	0.26

References: TM 9-1005-206-14P/4, TM 9-1005-206-12.

RIFLE, CALIBER .30: U.S., M1903A4 (SNIPER'S)



Major Item

Model	*Line item No.*	*Federal stock No.*
M1903A4, w/e	4-36130-30	1005-674-1521

General

RIFLE, CALIBER .30: U.S., M1903A4 is a magazine-fed, manually-operated, bolt action, shoulder weapon used for sniping. TELESCOPE: M73B1 or M84 is mounted to the top of the receiver. In addition, the bolt handle has a clearance cut on the outside to prevent interference with the telescope when the handle is raised to unlock the bolt. Ammunition must be loaded into the magazine singly because the telescope covers the top of the receiver. The telescope is a delicate instrument; therefore, care must be used in handling the rifle when it is mounted. This rifle is being replaced by RIFLE, CALIBER .30, AUTOMATIC: U.S., M1C.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight:	
(w/mount base)	8 lb, 11 oz
(w/telescope)	9 lb, 3 oz
Length:	
Overall	3 ft, 7½ in.
Barrel	24 in.
Operation	manaul
Feed	receiver magazine
Capacity of feeding device	5 rd
Cooling	air

AMMUNITION

Types	ball, tracer, AP, API, and dummy

PERFORMANCE

Muzzle velocity (ball)	2,800 fps
Maximum range (ball) (30° elevation)	3,500 yd

EQUIPMENT

Sighting and Fire Control [*]
Telescope: M73B1 or M84

Basic Issue Items: See ORD 7 SNL B-3.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .30 DUMMY: M40 (20/ctn) TRAINER, RIFLE, SIGHTING: device, M15

STORAGE AND SHIPMENT DATA

Domestic and Oversea Pack

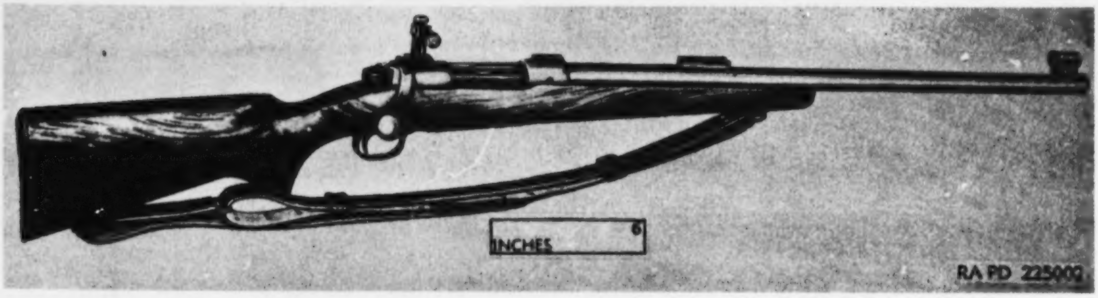
Shipped 10 rifles per wood box (VCI pack).

Length	3 ft, 11¾ in.
Width	1 ft, 1¾ in.
Height	1 ft, 1¾ in.
Volume	5.3 cu ft
Gross weight	164 lb
Ship tons	0.13

References: SNL B-3, TM 9-270, TM 9-1270, TM 9-2205.

[*] For characteristics and data, see item in section 14.

RIFLE, CALIBER .30: WINCHESTER, MODEL 70 (SPECIAL MATCH GRADE)



Model	*Major item* *Line item No.*	*Federal stock No.*
70, w/e	4–36008–00	1005–322–9736

General

RIFLE, CALIBER .30: Winchester, Model 70, is a bolt-action, 5-shot, magazine-loaded repeating rifle. The rear sight has click sight adjustments for windage and elevation. The front sight is a hooded detachable sight with nine interchangeable inserts. Provisions for mounting a telescope are provided. The stock is of walnut wood with a checkered steel butt plate.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	9½ lb
Length overall	3 ft, 8⅝ in.
Length of barrel	2 ft
Rifling:	
Length	
Number of grooves	4
Twist, right-hand	one turn in 10 in.
Operation	manual
Feed	magazine
Capacity of feeding device	5 rd
Type of front sight	hooded, interchangeable inserts
Type of rear sight	micrometer click
Cooling	air
Trigger pull	4 to 5½ lb

AMMUNITION

Type ---------- ball (180-grain bullet)

PERFORMANCE

Muzzle velocity ----------

Maximum range ----------

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B–50.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

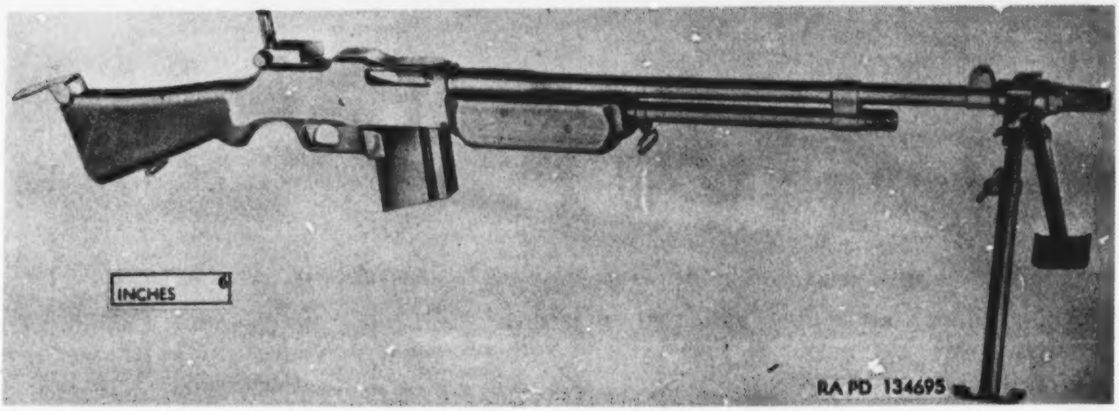
Shipped rifles per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped rifles per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

References: SNL B–50, TM 9–1005–226–14, SB 9–185.

RIFLE, CALIBER .30, AUTOMATIC: BROWNING, M1918A2



RA PD 134695

Major item

Model	*Line item No.*	*Federal stock No.*
M1918A2, w/e	4-36075-00	1005-674-1309

General

RIFLE, CALIBER .30, AUTOMATIC: Browning, M1918A2, is a gas-operated, magazine-fed, automatic, light infantry weapon. A selector located on the receiver regulates the rate of automatic fire so that the rifle can be fired either at high speed or at a retarded speed. Provision for firing single shots is not made. The rifle can be fired either from the shoulder, hip, or ground. When fired from the ground, a bipod attached to the muzzle end of the barrel is used. The butt plate has a hinged shoulder rest to provide additional support when firing.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight:	
(W/sling)	20 lb
(W/o equipment)	16 lb, 5 oz
Magazine	7 oz (empty) 1 lb, 7 oz (filled)
Bipod	2 lb, 7 oz
Length overall	3 ft, $11\frac{13}{16}$ in.
Length of barrel	$24\frac{1}{16}$ in.
Rifling:	
Length	21.41 in. (71.1 cal.)
Number of grooves	4
Twist, right-hand	one turn in 10 in. (33.3 cal.)
Depth of grooves	0.0040 in.
Capacity of feeding device	20 rd
Feed	magazine
Cooling	air
Sight radius	2 ft, $7\frac{1}{8}$ in.
Trigger pull	10 lb max; 6 lb min

AMMUNITION

Types ....ball, tracer, AP, incendiary, API, blank, and dummy

PERFORMANCE

Muzzle velocity (ball)	2,800 fps
Maximum range (ball) (30° elevation)	3,500 yd
Rate of fire:	
Fast automatic	500–650 rds per min
Slow automatic	300–450 rds per min

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A–4.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .30 DUMMY: M40.
For Graphic Training Aids and Devices, see DA Pam 310–5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 5 rifles, w/sling and cover per wood box.

Length	4 ft, $1\frac{1}{8}$ in.
Width	1 ft, $6\frac{1}{4}$ in.
Height	$8\frac{5}{8}$ in.
Volume	4.6 cu ft
Gross weight	160 lb
Ship tons	0.11

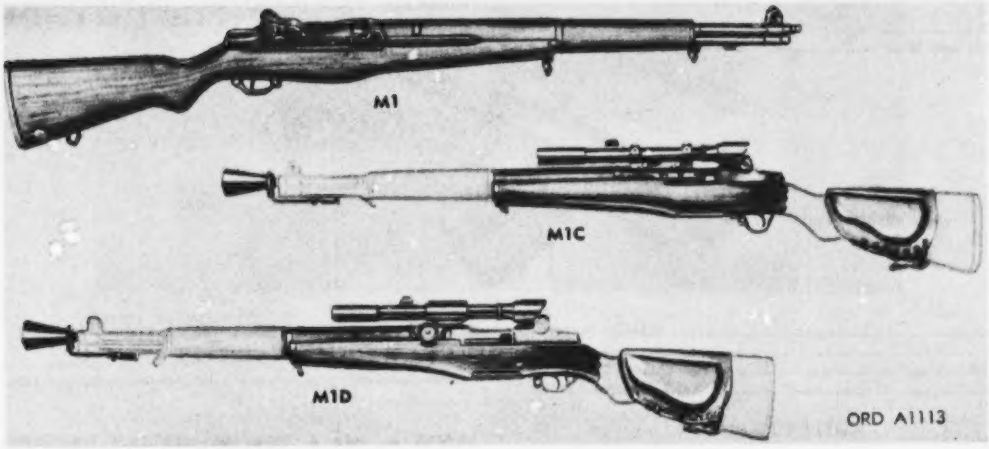
Outside Continental United States

Shipped rifles

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A–4, TM 9–2111–1, FM 23–15.

RIFLE, CALIBER .30, AUTOMATIC: U.S., M1, NATIONAL MATCH, M1, M1C (SNIPER'S), AND M1D (SNIPER'S)



ORD A1113

Major item

Model	*Line item No.*	*Federal stock No.*
M1, w/e	4-36090-00	1005-674-1425
M1C	4-36130-10	1005-674-1430
M1D, w/e	4-36130-20	1005-674-1431
M1, National Match, w/e	4-36091-10	1005-726-6476

General

RIFLE, CALIBER .30, AUTOMATIC: U.S., M1, M1C, and M1D, is gas-operated, semiautomatic, clip-fed, offensive shoulder weapon. Eight cartridges, loaded into a clip, are inserted into the receiver and a new cartridge automatically feeds into the chamber after each round is fired. When the last round in the clip has been fired, the clip is automatically ejected from the receiver and the bolt remains in its rearmost position ready for the insertion of another loaded clip. The trigger must be actuated to fire each round.

The M1 rifle, when specially selected for inherent accuracy during manufacture and when conforming to specific National Match Standards, is stamped NM on the barrel and is used for all competitive matches held within the Army areas in the zone of interior and overseas.

Differences among models

The rifles M1C and M1D differ from the M1 in that they have a telescope mount attached to the receiver. They also have a removable flash hider assembled to the front end of the barrel and a cheek pad laced to the stock.

The rifle M1D differs from the rifle M1C in the design of the telescope mount. On the rifle M1C, the telescope is held in a removable mount that has a dovetailed slide that mates with a bracket on the receiver. On the rifle M1D, the telescope is held in a removable mount, which is attached by a screw and plunger, on the barrel.

Rifles of early manufacture of the same model may differ somewhat due to change in design of some of the component parts.

Data plate location

Classification:		
	M1 and M1D	Standard B (OTCM 36841).
	M1C	Standard A (OTCM 37902).
	M1 National Match	No type classification.

CHARACTERISTICS

Weight:	
M1	9.5 lb
M1C or M1D:	
Without accessories, but including permanently mounted bracket	9.75 lb
With telescope, flash hider, gun sling, and cheek pad	11.75 lb
Length of rifle only	3 ft, 7⅝ in.
Length of rifle with flash holder (M1C and M1D)	3 ft, 10⅛ in.
Length of barrel	24 in.
Rifling:	
Length	21.30 in. (70.8 cal.)
Number of grooves	4
Twist, right-hand	one turn in 10 in.
Depth of grooves	0.0040 in.
Operation	gas
Feed	clip
Capacity of feeding device	8 rd
Cooling	air

AMMUNITION

Types	ball, tracer, AP, blank, incendiary API, dummy, and grenade cartridge (see grenade launcher M7-series).

PERFORMANCE

Muzzle velocity (ball)	2,800 fps
Maximum range (ball)	3,450 yd
Rate of fire	semiautomatic

EQUIPMENT

Sighting and Fire Control.*

Telescope: M84 (M1C and M1D)

Basic Issue Items: See TM 9-1005-222-12P/2 (M1, M1C, and M1D), TM 9-1005-222-12P/1 (M1, National Match).

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .30 DUMMY: M40.

TRAINER, RIFLE, SIGHTING: device, M15.

For Graphic Training Aids and Devices, see DA Pam 310-5.

* For characteristics and data for item, see section 14.

STORAGE AND SHIPMENT DATA

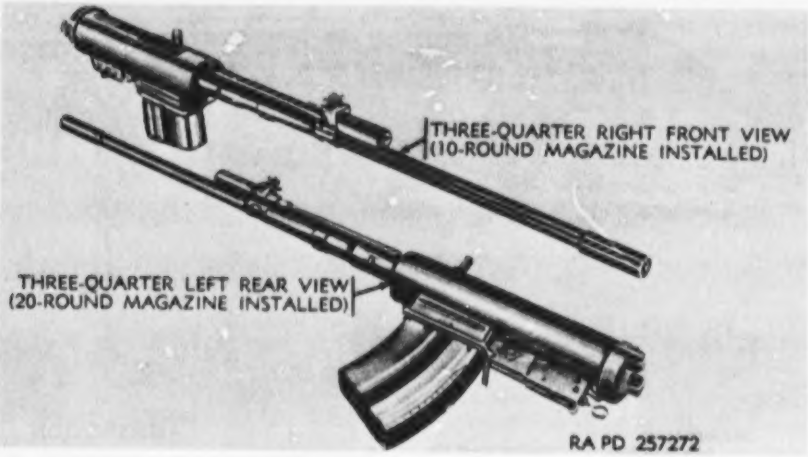
Within and Outside Continental United States

Shipped 10 rifles per wood box (VCI pack).

Length:	
M1	4 ft, 1 in.
M1C and M1D	3 ft, 11⅝ in.
Width:	
M1	1 ft, 6½ in.
M1C and M1D	1 ft, 1⅝ in.
Height:	
M1	1 ft, 1 in.
M1C and M1D	1 ft, 1⅝ in.
Volume:	
M1	6.8 cu ft
M1C and M1D	5.3 cu ft
Gross weight:	
M1	164 lb
M1C and M1D	182 lb
Ship tons:	
M1	0.17
M1C and M1D	0.13

References: TM 9-1005-222-12P/1, TM 9-1005-222-12P/2, TM 9-1005-222-35P, TM 9-2023-1, TM 9-1275, TM 9-2205, FM 23-5.

GUN, SPOTTING, CALIBER .50: M8C


THREE-QUARTER RIGHT FRONT VIEW
(10-ROUND MAGAZINE INSTALLED)
THREE-QUARTER LEFT REAR VIEW
(20-ROUND MAGAZINE INSTALLED)
RA PD 257272

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M8C		1005-511-9042

General

GUN, SPOTTING, CALIBER .50: M8C is used on RIFLE, 106-MILIMETER: M40A1 or M40A1C to assist the gunner in determining range. It is a magazine-fed, percussion-fired, gas-operated, semiautomatic weapon that utilizes special caliber .50 ammunition, which incorporates a tracer element and provides a smoke puff on impact. Either a 10-round or 20-round magazine may be used with this weapon.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:

Without magazine	24.41 lb
(w/10-round magazine (unloaded))	25.66 lb
(w/10-round magazine (loaded))	28.02 lb
(w/20-round magazine (unloaded))	26.54 lb
(w/20-round magazine (unloaded))	31.26 lb
10-round magazine (unloaded)	1.25 lb
10-round magazine (loaded)	3.61 lb
20-round magazine (unloaded)	2.13 lb
20-round magazine (loaded)	6.85 lb

Length:

Overall	3 ft, 8¾ in.
Barrel	2 ft, 8 in.

Rifling:

Length	
Number of grooves	8
Twist, right-hand	one turn in 12 in.
Depth of grooves	0.010 in.

Operation	gas
Feed	magazine
Capacity of feeding device	10 or 20 rd
Cooling	air

AMMUNITION

Types	practice, spotter-tracer

PERFORMANCE

Muzzle velocity	1,760 fps
Estimated accuracy life	5,000 rd

EQUIPMENT

Sighting and Fire Control:

Basic Issue Items: See TM 9-1000-205-12.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 rifles per shipping container.

Length	4 ft, 2⅞ in.
Width	1 ft, 5 9/16 in.
Height	1 ft, 1 1/16 in.
Volume	6.8 cu ft
Gross weight	180 lb
Ship tons	0.17

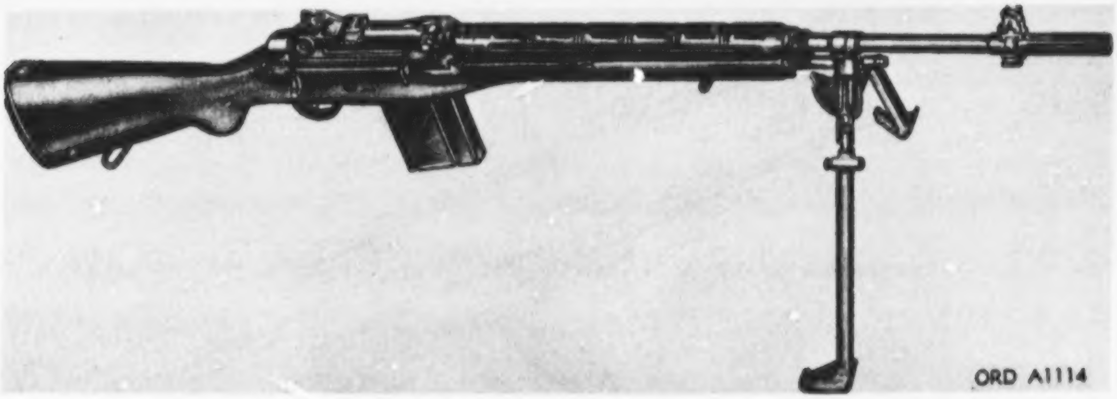
Outside Continental United States

Shipped 4 rifles per shipping container.

Length	4 ft, 2⅞ in.
Width	1 ft, 5 9/16 in.
Height	1 ft, 1 1/16 in.
Volume	6.8 cu ft
Gross weight	180 lb
Ship tons	0.17

References: TM 9-1000-205-12, TM 9-1005-217-34, TM 9-1005-217-35P.

RIFLE, 7.62-MILLIMETER, AUTOMATIC: M14; BIPOD, RIFLE: M2


ORD A1114

Major Item

Model	*Line item No.*	*Federal stock No.*
Rifle, M14, w/e	4-35965-01	1005-589-1271
Bipod, M2	4-01258-10	1005-711-6202

General

RIFLE, 7.62-MILLIMETER, AUTOMATIC: M14, is a lightweight shoulder weapon. Although designed primarily for semiautomatic firing, it can be fired semiautomatic or full automatic, depending upon selector settings. The rifle is chambered for 7.62 NATO cartridge and is similar to the rifle M1 in appearance and in operation. However, it is designed to accommodate 20-round box magazine. Two designs of this rifle are in use. Rifles of early manufacture have a solid wooden hand guard. Rifles of later manufacture have a fiberglass hand guard with vents. LAUNCHER, GRENADE: M76 (for U.S. Marine Corps use only) and BAYONET-KNIFE: M6 are used with this rifle. BIPOD, RIFLE: M2 has a latch which provides for ready attachment to or removal from the rifle. The legs of the bipod fold back along the stock of the rifle for ease in carrying. The legs are also telescoping to provide five positions within the range 10⅞ to 14⅛ inches.

Differences among models

Data plate location

Rifle:

Bipod:

The part number and nomenclature are stamped on the head assembly.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Rifle:	
Weight:	
(w/empty magazine less sling)	9.1 lb
(fully loaded w/sling attached)	11 lb
Length:	
Overall (w/flash suppressor)	3 ft, 8 5/16 in.
Barrel	1 ft, 10 in.
Rifling:	
Length	19.91 in.
Number of grooves	4
Twist, right-hand	one turn in 12 in.
Operation	gas
Feed	magazine
Capacity of feeding device	20 rd
Cooling	air
Type of mechanism	rotating bolt
Trigger pull	7.5 lb max; 5.5 lb min
Bipod:	
Weight	1⅝ lb
Spread of legs:	
With legs telescoped	12¾ in.
With legs fully extended	19¾ in.
Height:	
With legs telescoped	9¾ in.
With legs fully extended	13¼ in.

AMMUNITION

Types (NATO)	AP, blank, ball, tracer, and dummy

PERFORMANCE

Muzzle velocity	2,750 fps
Maximum range	3,200 meters
Maximum effective range	500 yd
Rate of fire:	
Semiautomatic	40 to 60 rd per min
Automatic	120 to 150 rd per min
Sustained	8 to 10 rd per min

EQUIPMENT

Basic Issue Items: See TM 9-1005-223-12.

INSTRUCTIONAL MATERIAL

ATTACHMENT, FIRING, BLANK: Ammunition, 7.62-mm, M12.
CARTRIDGE, 7.62 MILLIMETER DUMMY: NATO, M63.
DEVICE, AIMING: M2.
TRAINER, RIFLE, SIGHTING: device, M15.

STORAGE AND SHIPMENT DATA

Within Continental United States

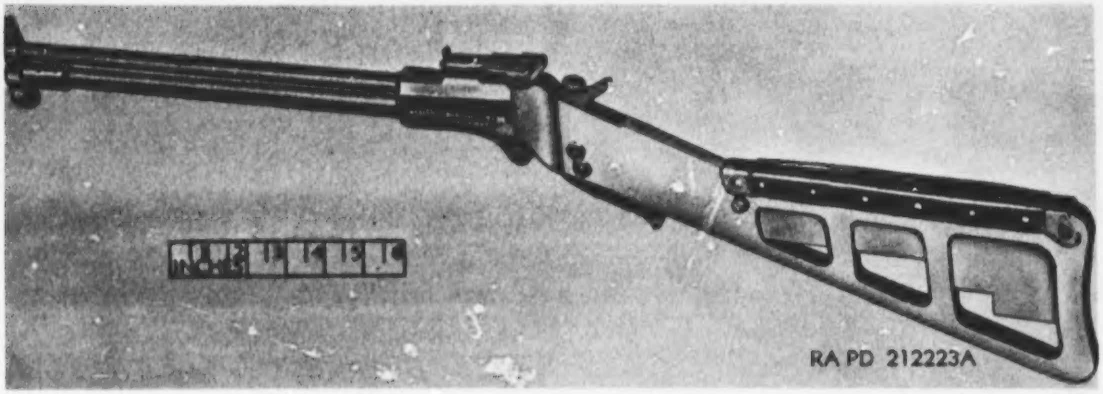
Shipped 10 rifles per wood shipping container.	
Length	4 ft, ⅝ in.
Width	1 ft, 10 in.
Height	1 ft, 1¼ in.
Volume	8.22 cu ft
Gross weight	176 lb
Ship tons	0.205
Shipped 60 bipods per shipping container.	
Length	2 ft, 10⅝ in.
Width	2 ft, 2⅝ in.
Height	1 ft, 3¼ in.
Volume	8.00 cu ft
Gross weight	135 lb
Ship tons	0.45

Outside Continental United States

Shipped 10 rifles per wood shipping container.	
Length	4 ft, 2⅞ in.
Width	1 ft, 10⅛ in.
Height	1 ft, ⅞ in.
Volume	8.44 cu ft
Gross weight	210 lb
Ship tons	0.211
Shipped 60 bipods per shipping container.	
Length	2 ft, 10⅝ in.
Width	2 ft, 2⅝ in.
Height	1 ft, 3¼ in.
Volume	8.00 cu ft
Gross weight	135 lb
Ship tons	0.45

References: TM 9-1005-223-12, TM 9-1005-223-20P, TM 9-1005-223-34, TM 9-1005-223-35P, FM 23-8.

RIFLE-SHOTGUN, SURVIVAL, CALIBER .22/.410-GAGE, M6 (T39)



Model	*Line item No.*	*Federal stock No.*
M6, w/e		1005–575–0073

General

RIFLE-SHOTGUN, survival, caliber .22/.410-gage, M6, is for use by Air Force personnel for procurement of food when such personnel are forced down in uninhabited or hostile territory. It is a single shot weapon of the "over and under" type. The top barrel is chambered for the cal. .22 Hornet cartridge; the lower barrel will accept the .410 shotgun shell or the .410 rifled slug. A spring actuated extractor is provided. The weapon is equipped with a sheet metal stock having provision for storing ammunition. A bar type trigger is used; no applied safety is provided. The rear sight is a "flip over" type containing a peep for the rifle barrel and an open sight for the shotgun barrel. The front sight is a blade type sight adjusted at manufacture. This sight is secured to the top barrel and constructed to provide clearance around the bottom barrel. This floating feature allows either barrel to elongate independently of the other when expansion occurs due to heat produced by firing. An eyelet is provided in the front sight for attaching one end of a sling.

Differences among models

Data plate location

Data are located on the left-hand side of the rifle-shotgun.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	3¾ lb
Length of barrel	14 in.
Length overall:	
Firing position	2 ft, 8¼ in.
Folded for packing	1 ft, 3 in.
Firing mechanism	percussion
Type of action	hammer, single shot

AMMUNITION

Cal. .22 Hornet cartridge:
Type ....ball (45-grain soft point bullet)
.410-gage shotgun cartridge:
Type ....Cartridge (3-in., No. 7½ chilled shot) (M35, all aluminum, 3-in., No. 6 chilled shot).

PERFORMANCE

Muzzle velocity (cal. .22 Hornet ctg)	2,690 fps
Average velocity over 25-yard range:	
.410-gage, 3-in., No. 7½ chilled shot	950 fps
Maximum effective range:	
.410-gage, 3-inch shotgun shell, No. 6 chilled shot	25 yd
Cal. .22 Hornet cartridge (ball)	50 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B–45.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 rifle-shotguns per wood box (VCI pack).

Length	3 ft, ½ in.
Width	1 ft, 7 in.
Height	1 ft, 6 in.
Volume	7.2 cu ft
Gross weight	200 lb
Ship tons	0.18

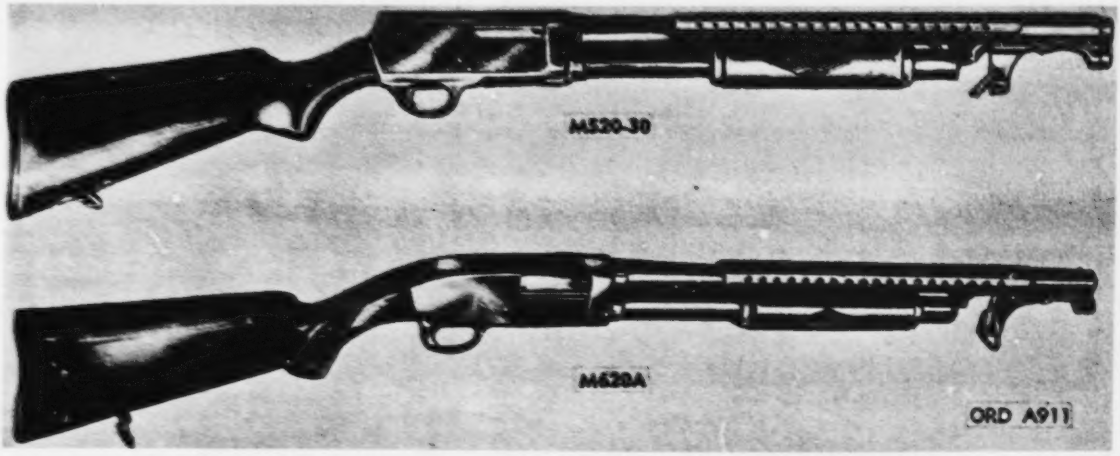
Outside Continental United States

Shipped 20 rifle-shotguns per wood box (VCI pack).

Length	3 ft, ½ in.
Width	1 ft, 7 in.
Height	1 ft, 6 in.
Volume	7.2 cu ft
Gross weight	200 lb
Ship tons	0.18

References: SNL B–45, TB ORD 409.

SHOTGUN, 12-GAGE, RIOT TYPE: STEVENS, MODELS M520–30 AND M620A, 20-INCH BARREL



Major item

Models	*Line item No.*	*Federal stock No.*
M520–30	4–40784	1005–677–9130
M620A		1005–577–9140

General

SHOTGUN, 12-GAGE, RIOT TYPE: Stevens, M520–30 or M620A, 20-inch barrel, is a manually-operated, slide action, repeating, hammerless, shoulder weapon. It is equipped with a type-S bayonet attachment, hand guard, sling, and sling swivels.

Differences among models

The shotgun M520–30 has the upper part of the rear of the receiver forming a corner; the safety is located in the receiver tang; and the stock is fastened by a screw running vertically through the receiver tang and the stock.

The shotgun M620A has the safety located in the trigger guard; it has a receiver extension instead of a receiver tang; and the stock is fastened to the receiver extension by a bolt running horizontally through the stock.

Data plate location

Classification: Standard A (OTCM 36641).

CHARACTERISTICS

Weight (w/attachments)	8 lb
Length overall	3 ft, 4 in.
Length of barrel	20 in.
Operation	manual
Feed	tubular magazine
Capacity of feeding device	5 rd
Cooling	air
Gage of bore	12
Diameter of bore	0.729 in.
Boring of barrel	cylinder

AMMUNITION

Types .... 12-gage shotgun cartridge—all brass No. 00 buck M19; paper—No. 00 buckshot, No. 9 chilled shot.

PERFORMANCE

Average velocity over 40-yd range:	
No. 00 buckshot	1,060 fps
Maximum effective range:	
No. 00 buckshot	60–75 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B–9.

INSTRUCTIONAL MATERIAL

For Graphic Training Aids and Devices, see DA Pam 310–5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 shotguns per wood box (VCI pack).

Length	3 ft, 8 in.
Width	1 ft, 4 in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	155 lb
Ship tons	0.12

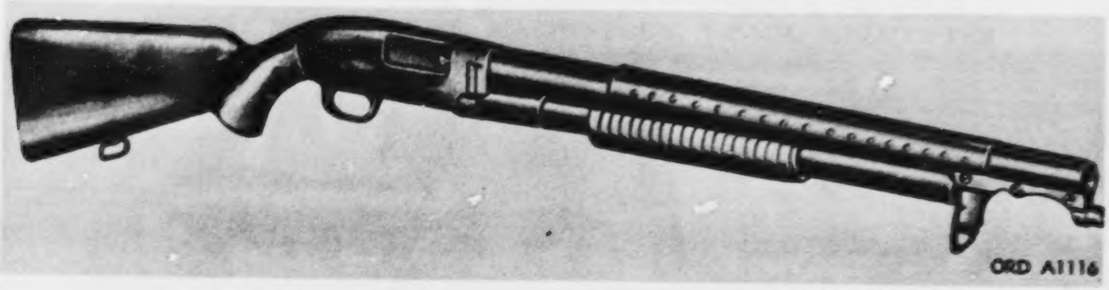
Outside Continental United States

Shipped 10 shotguns per wood box (VCI pack).

Length	3 ft, 8 in.
Width	1 ft, 4 in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	155 lb
Ship tons	0.12

References: SNL B–9, TM 9–285, TM 9–2117, TM 9–2205, SB 9–117.

SHOTGUN, 12-GAGE, RIOT TYPE: WINCHESTER, 20-INCH BARREL, M12 (M1912)


ORD A1116

Model	*Line item No.*	*Federal stock No.*
M12		1005-731-2086

General

SHOTGUN, 12-GAGE, RIOT TYPE: Winchester, 20-inch barrel, M12, is a manually-operated, slide action, repeating, hammerless, shoulder weapon having a solid frame. It is equipped with a type-W bayonet attachment, hand guard, sling, and sling swivels. This shotgun is used for guard duty.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight (w/attachments)	7 lb, 8 oz
Length overall	3 ft, 4 in.
Length of barrel	20 in.
Operation	manual
Feed	tubular magazine
Capacity of feeding device	5 rd
Gage of bore	12
Diameter of bore	0.729 in.
Cooling	air
Boring of barrel	cylinder

AMMUNITION

Types	12-gage shotgun cartridges-all brass No. 00 buck M19; paper No. 00 buckshot, No. 9 chilled shot.

PERFORMANCE

Average velocity over 40-yd range:	
No. 00 buckshot	1,060 fps
Maximum effective range:	
No. 00 buckshot	60-75 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-9.

INSTRUCTIONAL MATERIAL

For Graphic Training Aids and Devices, see DA Pam 310-4.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 shotguns per wood box (VCI pack).

Length	3 ft, 8 in.
Width	1 ft, 4 in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	150 lb
Ship tons	0.12

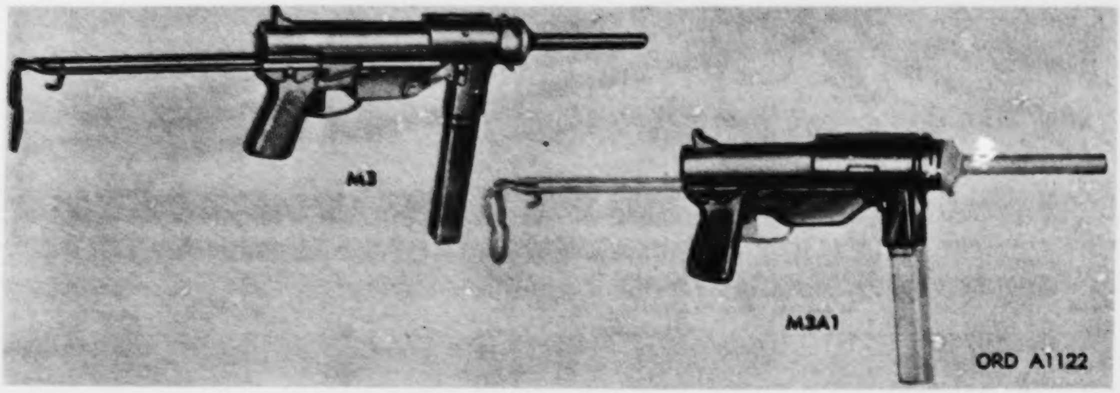
Outside Continental United States

Shipped 10 shotguns per wood box (VCI pack).

Length	3 ft, 8 in.
Width	1 ft, 4 in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	150 lb
Ship tons	0.12

References: SNL B-9, TM 9-285, TM 9-2117, TM 9-2206, SB 9-117.

SUBMACHINEGUN, CALIBER .45: M3 AND M3A1



Major item

Model	*Line item No.*	*Federal stock No.*
M3, w/e	4-17247-20	1005-672-1767
M3A1, w/e	4-17247-10	1005-672-1771

General

SUBMACHINEGUN, CALIBER .45: M3 and M3A1, is air-cooled, blowback-operated, magazine-fed, automatic weapon. They have a sliding metal stock which may be extended for shoulder firing. With the stock in its forward position, the gun may be fired from the hip. This gun is not considered safe when a loaded magazine is in place and the bolt is forward in the receiver unless the cover attached to the receiver is closed, thereby engaging the safety lock with its recess in the bolt. If the gun is dropped on the butt or if severely jarred, with the cover open, the bolt may move rearward far enough so that on its forward movement it may remove a round from the magazine and chamber and fire it.

Differences among models

The M3 submachinegun is cocked by a lever attached to the housing assembly and on the M3A1 the bolt is pulled to the rear with a finger to cock the gun.

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight (w/o equipment):	
M3	8 lb, 1 oz
M3A1	8 lb
Length overall (stock extended)	2 ft, 5$\frac{13}{16}$ in.
Length overall (stock forward)	1 ft, 10$\frac{13}{16}$ in.
Length of barrel	8 in.
Operation	blowback
Feed	magazine
Capacity of feeding device	30 rd
Cooling	air

AMMUNITION

Types	ball, tracer, and dummy

PERFORMANCE

Muzzle velocity (ball, 234-grain bullet)	920 fps
Maximum range (ball) (30° elevation)	1,760 yd
Rate of fire	350–450 rd per min

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-58.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .45 DUMMY: M1921.
For Graphic Training Aids and Devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 guns w/sling and oiler per wood box.

Length	1 ft, 7$\frac{3}{4}$ in.
Width	1 ft, 8$\frac{1}{4}$ in.
Height	1 ft, 5 in.
Volume	3.0 cu ft
Gross weight	128 lb
Ship tons	0.08

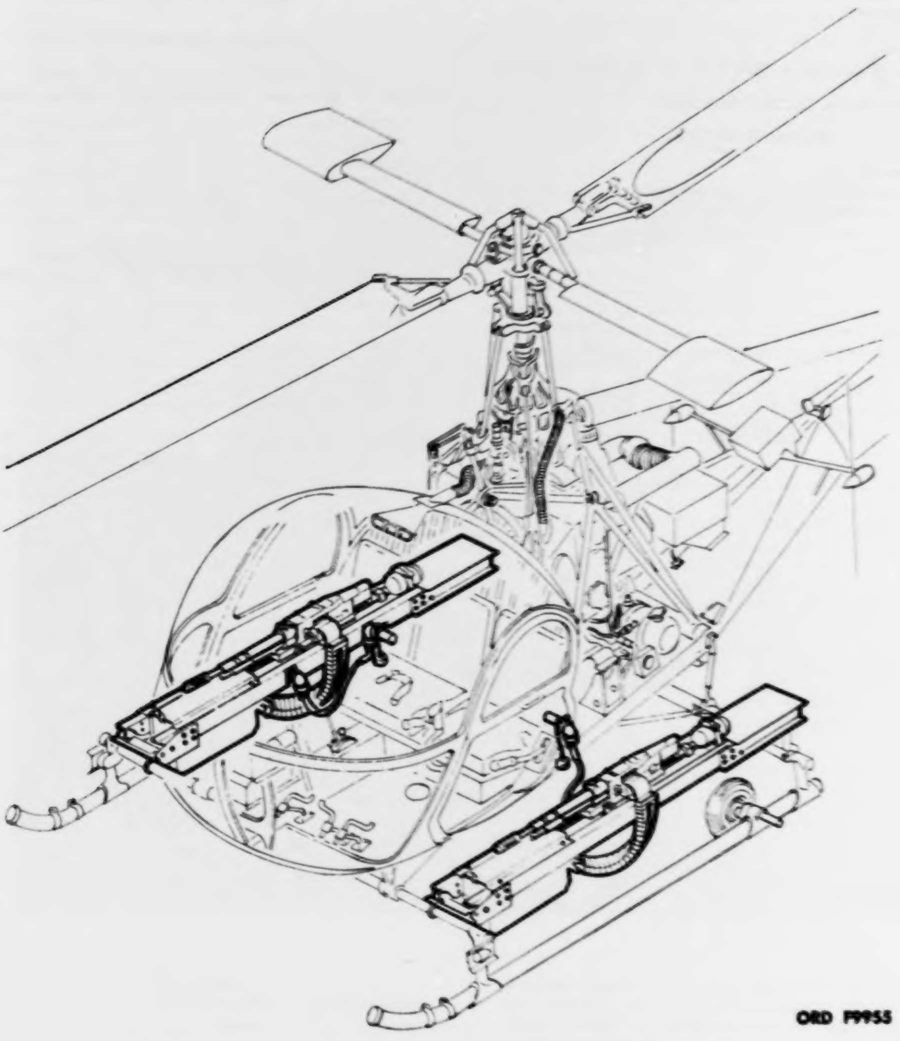
Outside Continental United States

Shipped guns

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-58, TM 9-2171-1, TM 9-2205, FM 23-41.

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: TWIN, M2 (XM2) (MACHINEGUN, 7.62-MILLIMETER: M60C; MOUNT, MACHINEGUN, 7.62-MM, HELICOPTER ARMAMENT SUBSYSTEM (7791961))



ORD F9955

Model	*Major item Line item No.*	*Federal stock No.*
M2	A90186	1005-953-9073

General

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: twin, M2 (XM2) is designed for installation on OH-13 (series) or OH-23 (series) helicopters. The subsystem mounts two MACHINEGUNS, 7.62-MILLIMETER: *M60C, one on each side of the helicopter, in individual mount assemblies which fasten to the front and rear cross tubes of the helicopter skids. The machineguns are interchangeable. Machineguns are pneumatically charged from a compressed gas charging system on each mount assembly. Weapon elevation and firing are electrically controlled from the cockpit. Ammunition for each machinegun is loaded in a single ammunition box secured to the mount assembly and is fed through an ammunition chute assembly to the machinegun.

Differences among models

When the subsystem M2 is installed on OH-13E and OH-13G helicopters, four bracket assemblies are installed on the helicopter skid cross tubes. Four pin and cable assemblies fasten the mount assemblies to the bracket assemblies. When the subsystem M2 is

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* Characteristics and data will be added at a later date.

Differences among models—Continued

installed on the OH-13H helicopter, mounting plate kits take the place of the bracket assemblies; pin and cable assemblies fasten the mount assemblies to the mounting plate kits. When the subsystem M2 is installed on the OH-23 (series) helicopter, the mount assemblies fasten directly to the helicopter skid cross bars and no bracket assemblies, mounting plate kits, or pin and cable assemblies are required.

Data plate location

One data plate is attached to right front of each mount assembly.

Classification: Standard A (AMCTC Item 01637)

CHARACTERISTICS

Armament subsystem:	
Weight (w/machineguns, w/o ammunition)	130.55 lb
Weight (w/machineguns, w/ammunition)	201.2 lb
Depression	0 deg
Depression rate	9 deg/second
Elevation	9 deg
Elevation rate	6 deg/second
Length	62¾ in.
Charger supply pressure	3000 psi max
Charger line pressure	300 to 600 psi
Machinegun:	
Length	43.5 in.
Weight (two guns)	42.0 lb

AMMUNITION

7.62-mm	capacity 1100 rds total
Types	ball, AP, tracer, dummy

PERFORMANCE

Rate of fire (both guns)	(approx) 1,100 rds per min

EQUIPMENT

Basic Issue Items: See TM 9-1005-247-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 armament subsystem per shipping container.

Length	6.0 ft
Width	2 ft, 1 in.
Height	1 ft, 10 in.
Volume	21.8 cu ft
Gross weight	260½ lb
Ship tons	0.5

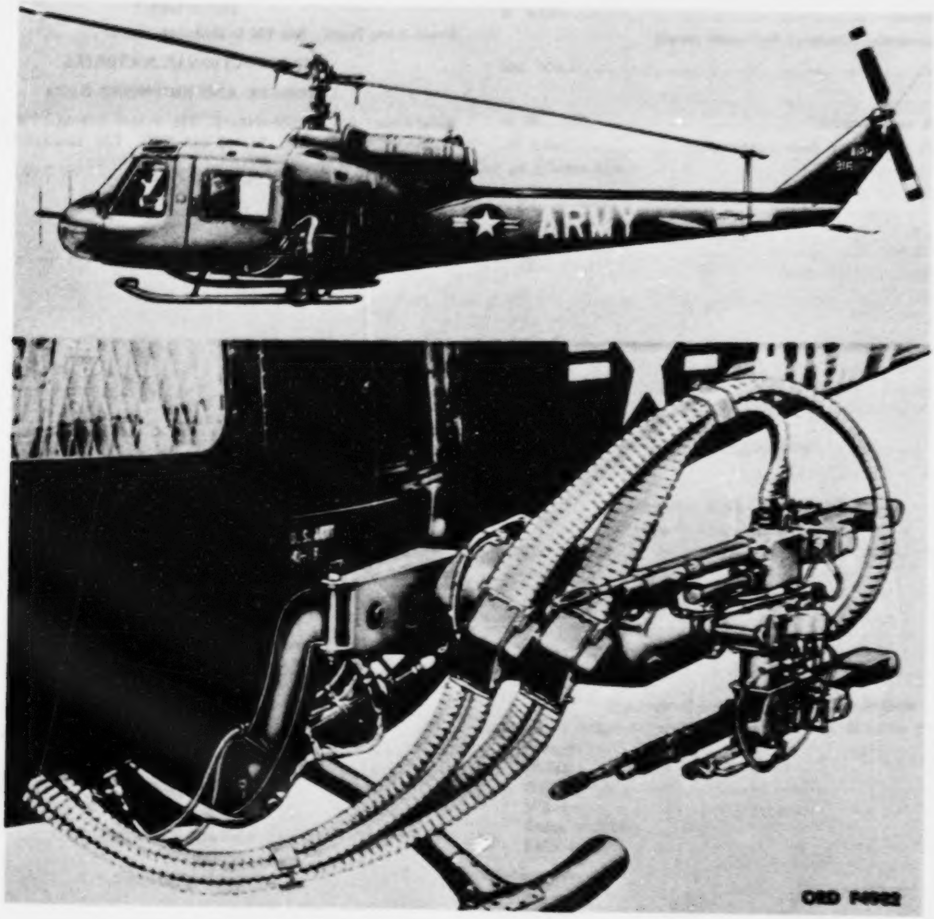
Outside Continental United States

Shipped 1 armament subsystem per shipping container.

Length	6.0 ft
Width	2 ft, 1 in.
Height	1 ft, 10 in.
Volume	21.8 cu ft
Gross weight	260½ lb
Ship tons	0.5

References: TM 9-1005-247-12, TM 9-1005-247-34, TM 9-1005-247-35P, TM 9-1005-247-ESC, TM 55-1520-204-10, TM 55-1520-206-10.

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: QUAD, M6 (XM6E3) (MACHINEGUN, 7.62-MILLIMETER: M60CA1; MOUNT, MACHINEGUN, 7.62-MM, HELICOPTER ARMAMENT SUBSYSTEM (7792569))



ORD F6982

Model	*Major item Line item No.*	*Federal stock No.*
M6	A90323	1005 086-8332

General

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: quad, M6 (XM6E3) consists of four MACHINEGUNS, 7.62-MILLIMETER: M60CA1 and MOUNT, MACHINEGUN, 7.62-mm, helicopter armament subsystem mounted on a UH-1B helicopter. The mount is composed of left-hand and right-hand mount assemblies which hold two machineguns each, 12 ammunition box assemblies and necessary ammunition chuting to connect with the machineguns, a control box panel and a sighting station used by the copilot to control and direct machinegun fire electrically. Machinegun charging and mount assembly movements in elevation and azimuth are powered hydraulically from the helicopter. The left-hand and right-hand mount assemblies provide a field of fire ranging from plus 9° to minus 66° in elevation, and from 12° inboard to 70° outboard in azimuth, with the mount assemblies being directed by electrical signals from the sighting station, independent of the helicopter attitude. When the subsystem is energized but the sighting station is not in use, the mount assemblies return to zero elevation and zero azimuth, or "stow" position. When in "stow" position, the machineguns may be fired by pilot or copilot from a switch on either cyclic stick as the helicopter is maneuvered to aim the machineguns.

Difference among models

Data plate location:

Data plates are attached to the back of each mount assembly, to the sighting station just under the sunshade, and to the body of the control box panel.

Classification: Standard A (AMCTC item 949)

CHARACTERISTICS

Armament subsystem:

Weight (both mount assemblies w/o guns or ammunition) .... 133.2 lb

Weight (both mount assemblies w/guns and ammunition) .... 685.9 lb

Cylinder assembly (charger) hydraulic supply pressure .... 1,500 psi

Machinegun:

Weight (4 machineguns) .... 85 lb

Gun length (including flash suppressor) .... 43.5 in.

AMMUNITION

7.62-mm .... capacity 6,000 rds total

Types .... ball, AP, tracer, dummy

PERFORMANCE

Rate of fire (4 guns) .... (approx) 2,200 rds per min

EQUIPMENT

Basic Issue Items: See TM 9-1005-243-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-1005-243-12, TM 9-1005-243-34, TM 9-1005-243-35P, TM 9-1005-243-ESC, TM 55-1520-211-10.

DRIVE, ELECTRIC: M7 (T48)

(Illustration will be added at a later date)

Major Item

Model	*Line item No.*	*Federal stock No.*
M7	....	1005-505-2040
M7, w/e	....	1005-862-8300

General

DRIVE, ELECTRIC: M7 is used to operate the GUN, 20 MILLIMETER, AUTOMATIC: M61*. The drive has an electric braking device built into the housing which is released upon application of power to the drive.

Differences among models

Data plate location

Data plate location is on the side of the drive.

Classification: Standard (For U. S. Air Force use only) (OTCM 37324)

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 drives w/ or w/o equipment per shipping container

Length	1 ft, 7⅝ in.
Width	1 ft, 6¾ in.
Height	1 ft, 6¾ in.
Volume	4.27 cu ft
Gross weight	196 lb
Ship tons	0.10

Outside Continental United States

Shipped 4 drives w/ or w/o equipment per shipping container

Length	1 ft, 7⅝ in.
Width	1 ft, 6¾ in.
Height	1 ft, 6¾ in.
Volume	4.27 cu ft
Gross weight	196 lb
Ship tons	0.10

References:

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* For characteristics and data, see item on page 2-19.

DRIVE, HYDRAULIC: M12

(Illustration will be added at a later date)

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M12	....	1005-661-1391

General

DRIVE, HYDRAULIC: M12 is used in the operation of the GUN, 20 MILLIMETER, AUTOMATIC: M61*. The drive is a ball motor which is connected to a hydraulic power system. The drive provides its own braking torque to stop the weapon when the power is cut.

Differences among models

Data plate location

Data plate location is on the side of the drive.

Classification: Standard (For U. S. Air Force use only)
(OTCM 37824)

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 drives per shipping container.

Length	28½ in.
Width	19 in.
Height	11⅝ in.
Volume	4.0 cu ft
Gross weight	130 lb
Ship tons	0.1

Outside Continental United States

Shipped 6 drives per shipping container.

Length	28½ in.
Width	19 in.
Height	11⅝ in.
Volume	4.0 cu ft
Gross weight	130 lb
Ship tons	0.1

References:

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* For characteristics and data, see item on page 2-19.

FEEDER, AUTOMATIC GUN: M2 AND M2A1

(Illustration will be added at a later date)

Secondary item

Model	*Line item No.*	*Federal stock No.*
M2	....	1005-701-6796
M2A1	....	1005-473-6152

General

FEEDER, AUTOMATIC GUN: M2 and M2A1 is used with the GUN, 20 MILLIMETER, AUTOMATIC: M61*. The feeder is driven by the rotor gear and pulls linked rounds from the ammunition box, strips the links from the rounds and ejects empty rounds. It feeds and guides the rounds into the extractor lip of the bolts which chamber the rounds.

Differences among models

Data plate location

Data plate location is on the top of the feeder.

Classification:

M2 ...Limited standard } For USAF use only (OTCM 37725)
M2A1 ....Standard }

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 feeder per shipping container.

Length	18⅜ in.
Width	10 in.
Height	9⅛ in.
Volume	.96 cu ft
Gross weight	22 lb
Ship tons	0.02

Outside Continental United States

Shipped 6 feeders per shipping container.

Length	33⅛ in.
Width	19½ in.
Height	19¾ in.
Volume	7.3 cu ft
Gross weight	174 lb
Ship tons	0.18

References:

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* For characteristics and data, see item on page 2-19.

FEEDER, AUTOMATIC GUN: M3 AND M3A1

(Illustration will be added at a later date)

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M3		1005-631-6229
M3A1		1005-473-8054

General

FEEDER, AUTOMATIC GUN: M3 and M3A1 is used with the GUN, 20 MILLIMETER, AUTOMATIC: M61*. The feeder is driven by the rotor gear and pulls linked rounds from the ammunition box, strips the links from the rounds, and ejects empty rounds. It feeds and guides the rounds into the extractor lip of the bolts which chamber the round.

Differences among models

Data plate location

Data plate location is on the top of the feeder.

Classification:

M3	Limited standard	For USAF use only (OTCM 37728)
M3A1	Standard	

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 feeder per shipping container.

Length	18¼ in.
Width	10 in.
Height	9⅛ in.
Volume	.96 cu ft
Gross weight	20.5 lb
Ship tons	0.02

Outside Continental United States

Shipped 6 feeders per shipping container.

Length	33⅛ in.
Width	19⅛ in.
Height	19⅛ in.
Volume	7.3 cu ft
Gross weight	165 lb
Ship tons	0.18

References:

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* For characteristics and data, see item on page 2-19.

LINKER-DELINKER, 7.62 MILLIMETER, HAND: M21

(Illustration will be added at a later date)

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M21		1005-605-2199

General

LINKER-DELINKER, 7.62-MM, HAND: M21, is used to link or delink 7.62-mm ammunition and M13 links. It is manually operated by means of a handle bar. The links are placed in the forward portion of the stripper bar — the ammunition is partially inserted into the rear of the links — the handle bar is then pulled forward and down to complete the linking operation. To delink, the entire belt is positioned on the rearward portion of the stripper bar — the handle bar is then pulled forward and down, forcing the rounds of ammunition forward through and out of the links, thus completing the delinking operation.

Differences among models

Data plate location

Data plate location is on top, front of the feeder.

Classification: Standa-d A (OTCM 37924)

CHARACTERISTICS

Weight	20 lb
Length	16$\frac{7}{16}$ in.
Width	9$\frac{1}{2}$ in.
Height	2$\frac{7}{8}$ in.
Capacity	

PERFORMANCE

Loading rate ,

EQUIPMENT

Basic Issue Items: See TM 9-1005-224-34P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 linker-delinker per shipping container.

Length	17$\frac{9}{16}$ in.
Width	11$\frac{5}{16}$ in.
Height	5$\frac{1}{8}$ in.
Volume	.26 cu ft
Gross weight	25 lb
Ship tons	0.006

Outside Continental United States

Shipped 6 linker-delinker per shipping container.

Length	36$\frac{11}{16}$ in.
Width	18$\frac{13}{16}$ in.
Height	11$\frac{1}{2}$ in.
Volume	4.5 cu ft
Gross weight	180 lb
Ship tons	0.1

References:

LINKER-DELINKER, CALIBER .50, HAND: M22

(Illustration will be added at a later date)

Model	*Line item No.*	*Federal stock No.*
M22		1005-893-4046

General

LINKER-DELINKER, CALIBER .50, HAND: M22, is used to link or delink caliber .50 ammunition and M15 or M15A1 links. It is manually operated by means of a handle bar. The links are placed in the forward portion of the stripper bar, the ammunition is partially inserted into the rear of the links, the handle bar is then pulled forward and down to complete the linking operation. To delink, the entire belt is positioned on the rearward portion of the stripper bar, the handle bar is then pulled forward and down forcing the rounds of ammunition forward through and out of the links, thus completing the delinking operation.

Differences among models

Data plate location

Data plate location is on the top, front of the linker-delinker.

Classification: Standard A (OTCM 37924)

CHARACTERISTICS

Weight	34.25 lb
Length	15⅝ in.
Width	13½ in.
Height	8⅝ in.
Capacity	10 rds

PERFORMANCE

Loading rate	

EQUIPMENT

Basic Issue Items: See TM 9-1005-231-35P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 linker-delinker per shipping container.

Length	20⅝ in.
Width	16 in.
Height	4⅞ in.
Volume	.92 cu ft
Gross weight	38⅝ lb
Ship tons	0.2

Outside Continental United States

Shipped 4 linker-delinker per shipping container.

Length	23½ in.
Width	20⅝ in.
Height	17⅛ in.
Volume	4.9 cu ft
Gross weight	186 lb
Ship tons	0.1

References:

PISTOL, CALIBER .22, AUTOMATIC: MARKSMAN TRAINING GRADE, MODEL 9271 SUPERMATIC TOURNAMENT HIGH STANDARD

(Illustration will be added at a later date)

Model	*Major item Line item No.*	*Federal stock No.*
As above	4-29195-05	1005-690-3220

General

PISTOL, CALIBER .22 AUTOMATIC: marksman training grade, Model 9271 supermatic tournament high standard, is a 10-shot, magazine-fed, recoil-operated, air-cooled, automatic loading hand weapon chambered for the caliber .22 long rifle cartridge only. The rear sight has a positive self-locking click adjustment for both windage and elevation. A positive lock safety is provided which locks the sear in the safe position. A slide lock automatically holds the slide open, after firing the last round in the magazine. Takedown of the barrel and the slide assembly is easily accomplished by depressing a barrel plunger cam.

Differences among models

Data plate location

Data are located on the left and right sides of the pistol.

Classification: No type classification.

CHARACTERISTICS

Weight	2 lb, 12 oz
Length overall	12 in.
Length of barrel	6¾ in.
Rifling:	
Length	16 in.
Number of grooves	6
Twist, right-hand	
Operation	blowback
Feed	magazine
Capacity of feeding device	10 rd
Type of front sight	adjustable ramp
Type of rear sight	micrometer click sight
Cooling	air
Trigger pull	2½–3 lb

AMMUNITION

Type	ball

PERFORMANCE

Muzzle velocity (long rifle, lead bullet) (cartridges of different manufacturers may vary)	970 fps
Maximum range (long rifle cartridge) (30-degree elevation)	1,500 yd

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols per shipping container.

Length	13¼ in.
Width	33¼ in.
Height	10 in.
Volume	2.54 cu ft
Gross weight	94 lb
Ship tons	0.06

Outside Continental United States

Shipped 25 pistols per shipping container.

Length	13¼ in.
Width	33¼ in.
Height	10 in.
Volume	2.84 cu ft
Gross weight	94 lb
Ship tons	0.06

References:

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: DOOR MOUNTED, LIGHTWEIGHT, XM23 (MACHINEGUN, 7.62-MILLIMETER: XM60D; MOUNT ASSEMBLY, LEFT SIDE (49937) AND MOUNT ASSEMBLY, RIGHT SIDE (49936))

Model	*Major item Line item No.*	*Federal stock No.*
XM23	A90117	1005-907-0720

General

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: door mounted, lightweight, XM23, is composed of two MACHINEGUNS, 7.62-MILLIMETER: XM60D[*] mounted on a MOUNT ASSEMBLY, LEFT SIDE and MOUNT ASSEMBLY, RIGHT SIDE, on the UH-1D helicopter. The mount assemblies secure to hard points on the helicopter, located so the machineguns can be fired by gunners standing in the open doors of the helicopter cargo compartment. Maximum elevation, depression, and traverse movements of the machineguns on the mount assemblies are controlled by the shape and size of the pintle pivots which carry the machineguns. Traversing locks on the mount pintle posts secure the machineguns in stowed position. Linked ammunition is carried in an ammunition box and cover assembly on each mount and is fed to each gun through a chute assembly. Spent cartridges are caught in an ejection control bag attached to the right side of each machinegun.

Differences among models

Data plate location

Data for the XM23 subsystem mount assemblies are stamped in the base assembly of each mount assembly.

Classification

CHARACTERISTICS

Armament subsystem:	
Weight (both mounts, w/ammo boxes, chuting, and bags, w/o machineguns or ammunition)	82.6 lb
Weight (both mounts, w/ammo boxes, chuting, and bags, w/two machineguns, w/600 rds of ammo per box)	208.8 lb
Elevation:	
Forward	61 mils
Aft	115 mils
Side	89 mils
Depression:	
Forward	1,457 mils
Aft	1,886 mils
Side	1,457 mils
Traverse:	
Forward	1,546 mils
Aft	1,546 mils
Machinegun, 7.62-millimeter: XM60D:	
Length, overall	44⅜ in.
Weight	24.7 lb

AMMUNITION

7.62-mm	capacity 600 rds total
Types	ball, AP, tracer, dummy

PERFORMANCE

Rate of fire, (each gun)	(approx) 550 rds per min

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-1005-262-15, TM 9-1005-262-ESC, TM 55-1520-210-10.

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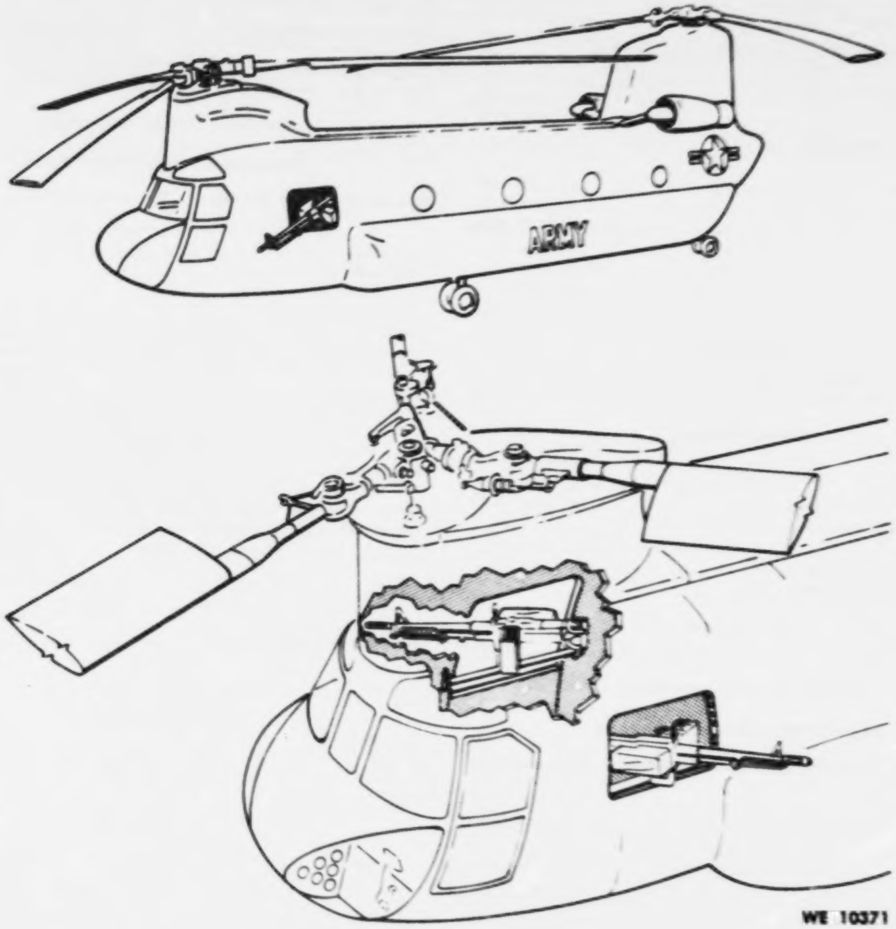
[*] Characteristics and data will be added at a later date.

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: DOOR MOUNTED, LIGHTWEIGHT, XM24 (MACHINEGUN, 7.62-MILLIMETER: XM60D; MOUNT ASSEMBLY, LEFT SIDE (50599) AND MOUNT ASSEMBLY, RIGHT SIDE (50600))



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Model	*Major item Line item No.*	*Federal stock No.*
XM24	A90122	1005-763 1404

General

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN: door mounted, lightweight, XM24, is composed of two MACHINEGUNS, 7.62-MILLIMETER: * XM60D mounted on a MOUNT ASSEMBLY, LEFT SIDE and MOUNT ASSEMBLY, RIGHT SIDE, on the CH-47A helicopter. The mount assemblies are installed horizontally across the right cabin doorway and across the escape hatch on the left side of the helicopter. Each mount assembly attaches to vertical members of the helicopter airframe. Boxed, linked ammunition is carried in an ammunition can assembly which attaches to the left side of each machinegun. The spent cartridges are caught in an ejection control bag attached to the right side of each machinegun. When not in use, each machinegun is swung to a traversing limit and is secured by an elastic shock cord assembly.

Differences among models

Data plate location:

Data for the XM24 subsystem mount assemblies are stamped on the triangular metal portion of the mount which supports the pintle post.

Classification

---

* Characteristics and data will be added at a later date.

CHARACTERISTICS

Armament subsystem:	
Weight (both mounts, w/ammo boxes and bags, w/o machineguns or ammunition)	35.6 lb
Weight (both mounts, w/ammo boxes, bags, machineguns, and two boxes of ammo per machinegun)	111.4 lb
Mount assembly, left side:	
Elevation:	
Forward	53 mils
Aft	115 mils
Depression	1,191 mils
Traverse:	
Forward	1,280 mils
Aft	1,066 mils
Mount assembly, right side:	
Elevation:	
Forward	53 mils
Aft	115 mils
Depression	1,366 mils
Traverse:	
Forward	1,333 mils
Aft	1,102 mils
Machinegun:	
Length, overall	44⅞ in.
Weight	24.7 lb

AMMUNITION

7.62-mm	capacity 200 rds per gun
Types	ball, AP, tracer, dummy

PERFORMANCE

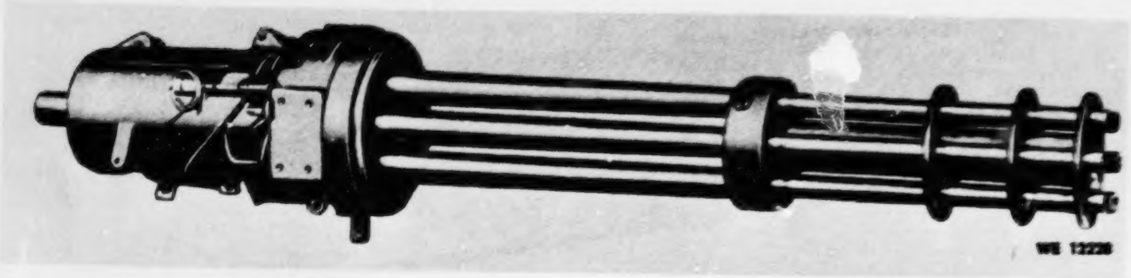
Rate of fire, (each gun)	(approx) 550 rds per min

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-1005-262-15, TM 9-1005-262-ESC, TM 55-1520-209-10.

GUN, AUTOMATIC, 7.62-MILLIMETER: GAU-2B/A



Model	*Major item* *Line item No.*	*Federal stock No.*
GAU-2B/A		1005-912-3987

General

GUN, AUTOMATIC, 7.62-MILLIMETER: GAU-2B/A is a lightweight, air-cooled, six-barrel weapon used on a fixed-wing and rotary-wing aircraft to deliver area suppressive fire. The gun will deliver fire at rates from 2,000 to 6,000 shots per minute. The different rates of fire are produced by use of differing gear ratios in the electric drive motor which powers the gun. Both the electric drive motor and the recoil adapter assemblies which support the gun are parts of the armament pod or armament subsystem which holds and feeds the gun. The gun operates on the Gatling gun principle, with ammunition fed into the right side of the gun, and spent or misfired cartridges are discharged from the bottom of the gun.

Differences among models

Data plate location:

Data are attached to right rear of the gun housing assembly.

Classification

CHARACTERISTICS

Length, complete	31.5 in.
Weight, complete	34.8 lb
Barrel:	
Length	22 in.
Weight, each	1 lb, 10 oz
Rifling twist	right hand
Cooling	air

AMMUNITION

7.62-mm capacity determined by pod or subsystem usign the [illegible]

Types	ball, AP, tracer, dummy

PERFORMANCE

Rate of fire:

9.8 to 1 drive ratio in electric drive motor	2,000 spm, 14-V DC to motor 4,000 spm, 24-V DC to motor
6.1 to 1 drive ratio in electric drive motor	4,000 spm, 18-V DC to motor 6,000 spm, 26-V DC to motor

EQUIPMENT

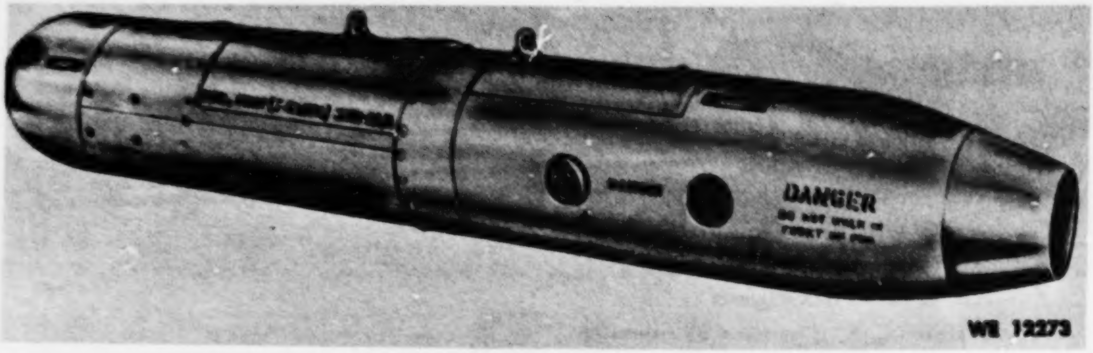
Basic Issue Items: See TM 9-1005-265-15P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-1005-265-15, TM 9-1005-265-15P.

POD, AIRCRAFT GUN, 7.62-MILLIMETER: SUU-11A/A



Model	*Major item Line item No.*	*Federal stock No.*
SUU-11A/A		1005-912-3988

General

POD, AIRCRAFT GUN, 7.62-MILLIMETER: SUU-11A/A is a lightweight cylindrical structure capable of containing a GUN, AUTOMATIC, 7.62-MILLIMETER: GAU-2B/A*, with ammunition storage space, a system for delivering the ammunition to the gun, and a storage battery with necessary cabling to the electric drive motor which powers the gun. The electric drive motor and the recoil adapter assemblies which support the gun in the pod are considered parts of the pod. The pod also contains a rounds counter to aid personnel in loading ammunition in the pod. The pod is designed to mount on aircraft with facilities to secure items with 14-inch double lug spacing, or single lug suspension, and may be used at air speeds up to Mach 1.2.

Differences among models

Data plate location:

Data are located on forward face of drum cover assembly.

Classification

CHARACTERISTICS

Length	85 in.
Diameter	12 in.

Weight:

Loaded (w/gun GAU-2B/A, w/ammunition)	(approx) 325 lb
Empty (w/gun GAU-2B/A, w/o ammunition)	(approx) 245 lb

AMMUNITION

7.62-mm	capacity 1,500 rds
Types	ball, AP, tracer, dummy

PERFORMANCE

Maximum burst length	full complement
Boresight adjustment (firing barrel of gun GAU-2B/A)	
Elevation	+1 deg 30 ft to —1 deg 30 ft
Azimuth	+1 deg 30 ft to —1 deg 30 ft
Operating temperature range	—65° to +165° F.

EQUIPMENT

Basic Issue Items: See TM 9-1005-266-15P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-1005-266-15, TM 9-1005-266-15P.

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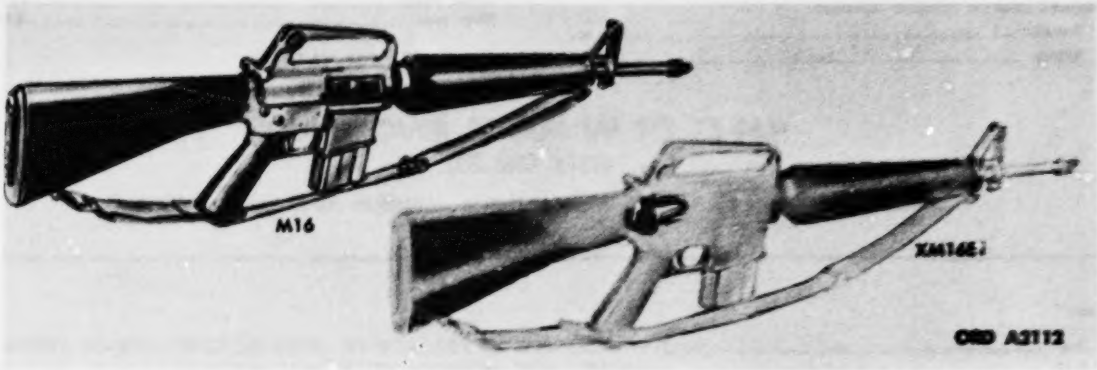
* For characteristics and data, see item on page 2-94.

RIFLE, 5.56-MILLIMETER: M16 AND XM16E1



Model	*Major item Line item No.*	*Federal stock No.*
M16 (USAF)		1005-856-6885
XM16E1 (Army)		1005-073-9421

General

RIFLE, 5.56-MILLIMETER: M16 and XM16E1, is a lightweight, air-cooled, gas-operated, magazine-fed, shoulder or hip weapon and is designed for either full automatic or semiautomatic fire. Each rifle accommodates a 20-round magazine.

The barrel is air-cooled and is provided with a flash suppressor, that may serve as a grenade launcher and a front support for the BAYONET-KNIFE: * M7. The barrel is surrounded by a heat resisting fiber glass material, which serves as a hand guard and forearm. The hand guard has a heat resisting inner shield. The front and rear sights are adjustable.

The butt stock is made of a durable synthetic material of high impact strength.

Differences among models:

The M16 has the same component parts as the XM16E1 except the XM16E1 has a forward assist assembly with associated parts.

Data plate location

Classification

CHARACTERISTICS

Weight:	
M16:	
(w/loaded magazine and sling)	7.4 lb
(w/o magazine and sling)	6.3 lb
XM16E1:	
(w/loaded magazine and sling)	7.6 lb
(w/o magazine and sling)	6.5 lb
Sling, M1	0.4 lb
Empty aluminum magazine	0.2 lb
Loaded aluminum magazine	0.7 lb
Telescope	0.9 lb
Bipod, M3	0.6 lb
Bipod case	0.2 lb
Bayonet-knife, M7	0.6 lb
Scabbard, M8A1	0.3 lb
Length:	
Rifle:	
With flash suppressor	39 in.
With bayonet-knife	44.25 in.
Barrel	20 in.
Barrel with flash suppressor	21 in.
Rifling:	
Length	
Number of grooves	6
Twist, right-hand	one turn in 12 in.
Bore (maximum)	.220 in.
Groove (maximum)	.2245 in.
Capacity of feeding device	20 rds
Feed	magazine
Cooling	air
Sight radius	19¾ in.
Trigger pull:	
Maximum	8.5 lb
Minimum	5.0 lb
Method of operation	gas
Type of mechanism	rotating bolt

AMMUNITION

Caliber	.223 in. (5.56-mm)
Type	ball and tracer

PERFORMANCE

Muzzle velocity	(approx) 3,250 fps
Muzzle energy	1,300 ft-lb
Chamber-pressure	52,000 psi
Cyclic rate of fire	700/800 rds per min
Maximum rate of fire:	
Semiautomatic	45/65 rds per min
Automatic	150/200 rds per min
Sustained rate of fire	12/15 rds per min
Maximum range	2,653 meters
Maximum effective range	460 meters

EQUIPMENT

Basic Issue Items: See TM 9-1005-249-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 rifles w/sling per cardboard box w/equipment.

Length	40 in.
Width	9 in.
Height	5½ in.
Volume	1.14 cu ft
Gross weight	24 lb
Ship tons	0.028

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* Characteristics and data will be added in section 2 at a later date.

STORAGE AND SHIPMENT DATA—Continued

Outside Continental United States

Shipped 2 rifles per shipping container.

Length	40 in.
Width	9 in.
Height	5½ in.
Volume	1.14 cu ft
Gross weight	24 lb
Ship tons	0.028

References: TM 9-1005-249-14.

SECTION 3

GUNS, OVER 30-MM UP TO 75-MM
(CLASS 1010)

(Includes subcaliber cannons, mortars and mortar cannons, and rifles.)

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CANNON, 37-MILLIMETER GUN, SUBCALIBER: M12 (interior type)	3-2
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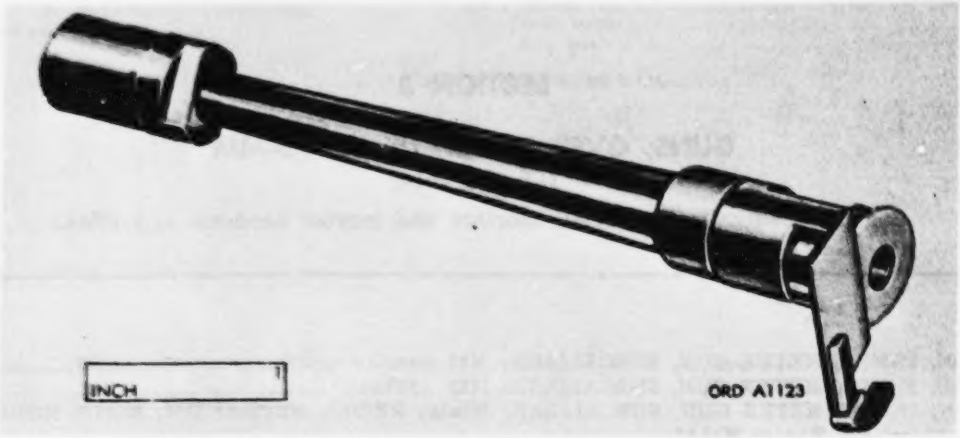
CANNON, 37-MILLIMETER GUN, SUBCALIBER: M12 (INTERIOR TYPE)



Major item

Model	*Line item No.*	*Federal stock No.*
M12	4-17227-01	1010-672-4844

General

CANNON, 37-MILLIMETER GUN, SUBCALIBER: M12 (interior type), consisting of a tube, deflector, extractor, and lock assembly, is a single-shot, hand-loaded weapon. It is used for training in laying and firing the HOWITZER, PACK: 75-mm, M116 w/e (CANNON, 75 MILLIMETER PACK HOWITZER: M1A1; RECOIL MECHANISM: M1-SERIES: CARRIAGE: HOWITZER PACK), 75-mm, M8 and the CANNON, 75-MILLIMETER HOWITZER: M3; MOUNT, HOWITZER: 75-mm, M7. The use of smaller bore ammunition prevents wear on the regular piece during practice and is less costly. The tube has an enlarged portion near the chamber end which acts as a rear adapter to center the cannon in the chamber of the pack howitzer, and a combination front adapter and gas deflector which is screwed on at the muzzle end of the tube. The tube is fixed longitudinally in the pack howitzer by a welded lock assembly which fits in a transverse vertical keyway at the rear of the tube and fastens to the lower left side of the breech ring by means of a setscrew passing through a clamp. A sliding cylindrical sleeve, which encases the rear end of the tube, completes the subcaliber cannon. The rear end of this sleeve is partly cut away and is counterbored for the rim of a 37-mm cartridge, thus forming an extractor for the cartridge case. Percussion is obtained by operation of the firing mechanism of the howitzer which actuates its firing pin, causing it to strike the primer of the 37-mm cartridge.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	35 lb
Length overall	2 ft, 9⅝ in.
Length of tube	2 ft, 6⅛ in. or 20 calibers
Rifling:	
Length	2 ft, 9/16 in.
Twist, right-hand	one turn in 25 calibers
Number of grooves	12

AMMUNITION

Type .... TP

PERFORMANCE

Muzzle velocity:
Cartridge M63 Mod 1 .... 1,100 fps
Range (maximum):
Cartridge M63 Mod 1 .... 4,980 yd

EQUIPMENT

Sighting and fire control:
TABLE, FIRING: FT 37-BJ-1 (abr).
TABLE, FIRING: FT 37-BA-2 (abr).
In addition to above equipment, use sighting equipment issued with primary weapon listed in GENERAL paragraph.

Basic Issue Item: See ORD 7 SNL C-33, section 15.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

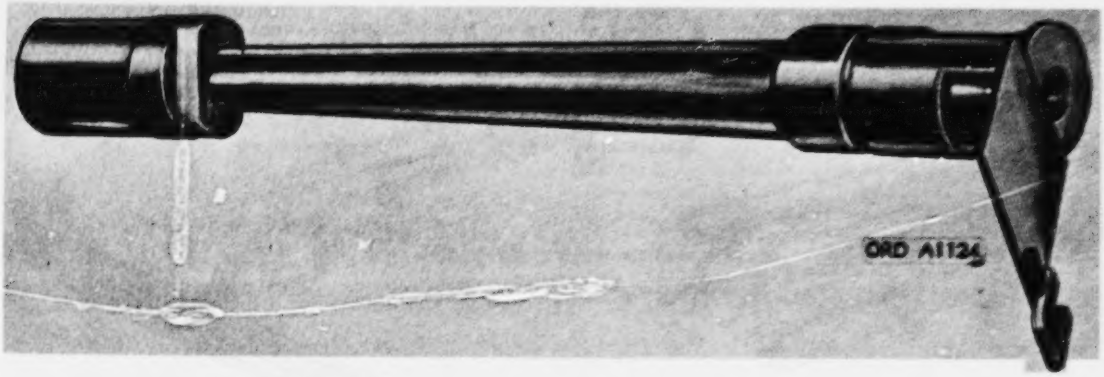
Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL C-33, Section 15; TM 9-318, TM 9-319.

CANNON, 37-MILLIMETER GUN, SUBCALIBER: M13



Model	*Major item* *Line item No.*	*Federal stock No.*
M13	4-17229-01	1010-672-4847

General

CANNON, 37-MILLIMETER GUN, SUBCALIBER: M13, consisting of a tube, blast deflector, extractor, and lock assembly, is a single-shot, hand-loaded weapon. It is used for training in laying and firing the CANNON, 105-MILLIMETER HOWITZER: M2A1; RECOIL MECHANISM: M2-series; CARRIAGE, HOWITZER: 105-mm, M2A1 or M2A2; and the CANNON, 105-MILLIMETER HOWITZER: M2A1; MOUNT, HOWITZER: 105-mm, M4 or M4A1. The use of smaller bore ammunition prevents wear on the regular piece, during practice and is less costly. The blast deflector, which is screwed onto the muzzle end of the tube, and the collar, near the breech end of the tube support and aline the tube in the chamber and bore of the howitzer cannon. The tube is secured in the howitzer cannon by a welded lock assembly which fits in a vertical keyway at the rear of the tube and fastens to the lower left side of the breech ring by means of a cap screw passing through a clamp on the lock assembly. The extractor encases the rear end of the tube. The rear end of the extractor is partly cut away and is counterbored for the rim of a 37-mm cartridge. Percussion is obtained by operation of the firing mechanism of the howitzer cannon.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight	43 lb
Length:	
Overall	2 ft, 9⅝ in.
Tube	2 ft, 5⅛ in. or 20 calibers
Rifling:	
Length	2 ft, $^{9}/_{16}$ in.
Twist, right-hand	one turn in 25 calibers
Number of grooves	12

AMMUNITION

Type	TP

PERFORMANCE

Muzzle velocity:	
Cartridge M63 Mod 1	1,100 fps
Range (max.):	
Cartridge M63 Mod 1	4,390 yd

EQUIPMENT

Sighting and fire control:

TABLE, FIRING: FT 37-BA-2 (abr)
TABLE, FIRING: FT 37-BJ-1 (abr)

In addition to above equipment, use sighting equipment issued with primary weapon listed in GENERAL paragraph.

Basic Issue Items: See ORD 7 SNL C-33, section 16.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

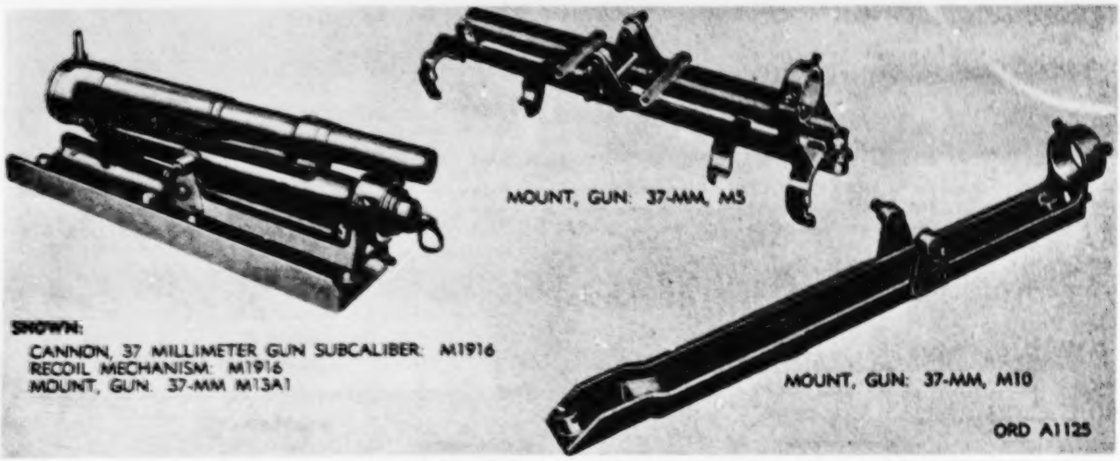
Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL C-33, section 16; TM 9-325; TM 9-326.

CANNON, 37-MILLIMETER GUN, SUBCALIBER: M1916; RECOIL MECHANISM: M1916; MOUNT, GUN: 37-MM, M5, M10, OR M13A1



Major item				
Model			*Line item No.*	*Federal stock No.*
Cannon	*Mount*	*Recoil Mechanism*		
M1916	M5	M1916	4–17235–10	1010–672–4955
M1916	M10	M1916	4–17235–20	1010–028–6698
M1916	M13A1	M1916	4–17235–30	1010–672–4961

General

CANNON, 37-MILLIMETER GUN, SUBCALIBER: M1916; RECOIL MECHANISM: M1916; MOUNT, GUN: 37-mm, M5, M10, or M13A1, is a single-shot, hand-loaded breechblock. It is used for extensive training in laying and firing the following major weapons: HOWITZER, MEDIUM, TOWED: 155-mm, M114 w/e (CANNON, 155 MILLIMETER HOWITZER: M1 or M1A1; CARRIAGE, 155-MILLIMETER HOWITZER: M1A1) or M114A1 (CANNON, 155-MILLIMETER HOWITZER: M1 or M1A1; CARRIAGE, 155-MILLIMETER HOWITZER: M1A2); CANNON, 8-INCH HOWITZER: M2; CARRIAGE, 8-INCH HOWITZER: M1; HOWITZER, PACK: 75-mm, M116, w/e (CANNON, 75 MILLIMETER PACK HOWITZER: M1A1; RECOIL MECHANISM: M1-SERIES; CARRIAGE: HOWITZER (PACK), 75-mm, M8); GUN, FIELD ARTILLERY, TOWED: 155-mm, M59, w/e (CANNON, 155 MILLIMETER GUN: M2 or M2A1; RECOIL MECHANISM: M3-SERIES; CARRIAGE, 155-MILLIMETER GUN: M1); CANNON, 155 MILLIMETER GUN: M2; MOUNT, GUN: 155-mm, M13; CANNON, 8-INCH HOWITZER: M2; MOUNT, HOWITZER: 8-INCH, M17; and CANNON, 155-MILLIMETER HOWITZER: M1; MOUNT, HOWITZER: 155-mm, M14. The use of smaller bore ammunition prevents wear in the regular piece during practice and is less costly. Although the actual handling, loading, and range obtained are different, the results in elevating, traversing, and similar operations are adequate for instructional purposes.

The subcaliber cannon consists principally of the tube assembly, breechblock assembly, breechblock lever assembly, and piston crosshead key assembly.

The recoil mechanism consists of the recoil mechanism, counterrecoil mechanism, and counterrecoil buffer.

Each gun mount consists of a cradle mounting bracket to which are attached a collar at the front end and a trunnion bracket in the center.

The subcaliber cannon rests on the recoil mechanism and, in turn, they are secured to the mount which is adapted to the particular weapon.

Differences among models

In general, the mounts M5, M10, or M13A1 are designed to fit the configuration of the cannon of the major weapon to which they are attached. Similar collars and cradle trunnion brackets are used to secure the cannon and recoil mechanism; however, mounts M10 and M13A1 are constructed of channels while mount M5 is made from welded angles and shaped, slotted brackets.

Data plate location

Classification: Standard A (OTCM 37198).

CHARACTERISTICS

Cannon:
- Weight of cannon and recoil mechanism ....56 lb, 4 oz
- Length of bore ....2 ft, 5⅛ in.
- Length of cannon ....2 ft, 7⅓ in.
- Type of breechblock ....eccentric screw
- Type of firing mechanism ....trigger

Recoil mechanism:
- Type ....hydrospring
- Length of recoil (max. allowable) ....7 to 10 in.
- Capacity ....2⅝ pt

Mount:
- Weight:
  - M5 ....
  - M10 ....31 lb, 12 oz
  - M13A1 ....31 lb, 12 oz
- Elevation ....same as piece to which it is attached
- Depression ....same as piece to which it is attached
- Traverse ....same as piece to which it is attached
- Operation of firing linkage ....manual

AMMUNITION

Type ....TP

PERFORMANCE

Muzzle velocity:
- Cartridge M63, Mod 1 ....1,100 fps

Range (maximum):
- Cartridge M63, Mod 1 ....4,980 yd

Rate of fire (maximum): ....35 rd per min

EQUIPMENT

Sighting and fire control.

TABLE, FIRING: FT 57-BJ-1 (abr)

TABLE, FIRING: FT 57-BA-2 (abr)

In addition to above equipment, use sighting equipment issued with primary weapon listed in "GENERAL" paragraph.

Basic Issue Items: See ORD 7 SNL C-33, section 18, 3, 7.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

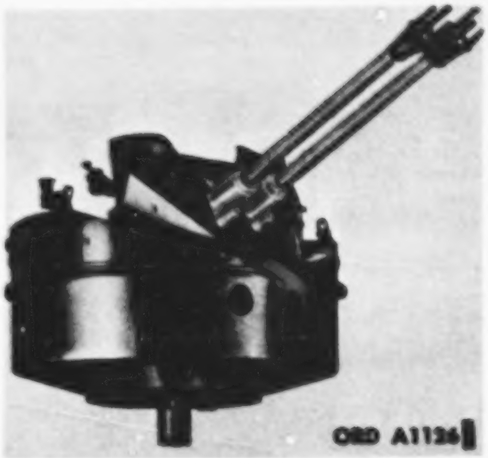
Shipped
- Length --
- Width --
- Height --
- Volume --
- Gross weight --
- Ship tons --

Outside Continental United States

Shipped
- Length --
- Width --
- Height --
- Volume --
- Gross weight --
- Ship tons --

References: SNL C-33, TM 9-319, TM 9-8004, TM 9-331A.

CANNON, 40-MILLIMETER DUAL AUTOMATIC GUN: M2A1; MOUNT, GUN: 40-MM, TWIN M4E1



Model Cannon	Model Mount	Secondary item Line item No.	Federal stock No.
M2A1			1010-790-8371
	M4E1		1010-047-3862

General

CANNON, 40-MILLIMETER DUAL AUTOMATIC GUN: M2A1 with MOUNT, GUN: 40-mm, twin, M4E1, is armament for the GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin 40-mm, M19A1, or M42 or M42A1, respectively. The cannon M2A1 is intended primarily for antiaircraft fire in the range between that of the 90-mm gun cannon and the cal. .50 machinegun. It can also be used against ground targets.

The cannon M2A1 is recoil operated and has a vertical sliding breechblock. Selectivity for automatic or single fire is provided for the cannon. The cannon is traversed by rotating the entire mount. A percussion-type firing mechanism is provided for the cannon.

The cannon M2A1 is mounted on the mount M4E1. Power and manual traversing mechanisms are provided for a continuous 360° traverse in either direction.

Differences among models

Data plate location

Data for the tube of the cannon are stamped in the top surface of the breech end of the cannon. The cannon identification plate is mounted on the left side of breech casing above the side cover. The gun mount identification plate is located on the left side of mount below the elevation handcrank.

Classification:

Cannon M2A1	Standard A (OTCM 36841)
Mount M4E1	Standard A

CHARACTERISTICS

Cannon:	
Weight	(approx) 2,000 lb
Weight of tube	286 lb
Length	12 ft
Length of tube	7 ft, 4-9/16 in.
Rifling:	
Length	6 ft, 3¾ in.
Number of grooves	16
Twist, right-hand	nonuniform, increasing from one turn in 45 calibers at the breech to one turn in 30 calibers at the muzzle.
Type of breechblock	vertical sliding
Type of firing mechanism	percussion
Estimated accuracy life of tube	12,000 rds
Mount:	
Weight (complete w/cannon)	6,300 lb
Type of recoil mechanism	recuperator spring and oil
Number of recoil cylinders	2
Length of recoil:	
Minimum	7.4 in.
Maximum	8.3 in.
Capacity of recoil mechanism	2.64 qt
Elevation:	
Maximum (power)	85 deg
Maximum (manual)	87 deg
Depression:	
Power	—3 deg
Manual	—5 deg
Traverse	—360 deg
Operation of firing linkage	manual or electric

AMMUNITION

Types	AP-T and HE-T (fixed)

PERFORMANCE

Muzzle velocity:	
AP-T	2,870 fps
HE-T	2,870 fps
Range (max):	
HE-T:	
Vertical	5,100 yds
Horizontal	5,200 yds
AP-T	9,475 yds
Rate of fire	240 rds per min

EQUIPMENT

Sighting and fire control *:

LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1E1
SIGHT, COMPUTING: M38 (T154)
SIGHT, REFLEX: M24C

Basic Issue Items: See ORD 7 SNL G-248 and TM 9-7218.

INSTRUCTIONAL MATERIAL

Subcaliber equipment:

MOUNT, GUN: caliber .50, M19.

STORAGE AND SHIPMENT DATA

Within Continental United States

Number per box	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

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* For characteristics and data, see item in sections 12, 14, and 18.

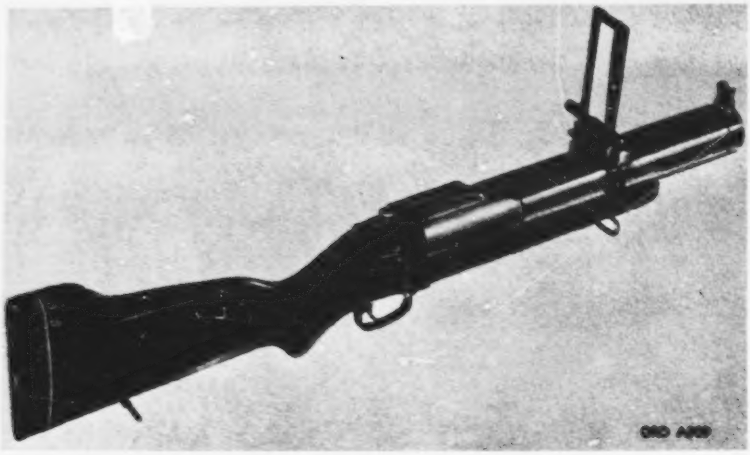
STORAGE AND SHIPMENT DATA—*Continued*

Outside Continental United States

Number per box ....
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL A-50, TM 9-3046, TM 9-7218.

LAUNCHER, GRENADE: 40-MM, M79



Model	*Major item Line item No.*	*Federal stock No.*
M79	4-20670-10	1010–691–1382

General

Launcher, grenade: 40-mm, M79, is a single-shot, break-open shoulder fire weapon. Its appearance is that of a short hammerless single-barrel shotgun except that the barrel has a larger diameter. It is breech loading and chambered for a 40-mm metallic cartridge case with internal primer. The barrel is made of aluminum. The front sight is a conventional military type with guard wings like those of the carbine or rifle M1. The rear sight is a large folding leaf, far up the barrel since high elevations are required, and is adjustable for elevation and windage. A rubber recoil pad is located on the rear end of the stock.

Differences among models

Data plate location

The model and serial numbers are stamped on the bottom surface of the receiver, forward of the trigger guard.

Classification: Standard A (OTCM 37626).

CHARACTERISTICS

Weight:	
Loaded	6.45 lb
Unloaded	5.95 lb
Length overall	2 ft, 4¾ in.
Length of barrel	1 ft, 2 in.
Rifling:	
Length	11-13/16 in.
Number of lands	6
Twist, -hand	one turn in 48 in.
Type of fire	single shot
Type of operation	manually trigger operated
Feed	manually breech loaded

AMMUNITION

Types	Fixed-HE and practice

PERFORMANCE

Muzzle velocity	250 fps
Maximum range	410 yd (375 meters)
Rate of fire	

EQUIPMENT

Sighting and Fire Control

Basic Issue Items: See TM 9–1010–205–12.

INSTRUCTIONAL MATERIAL

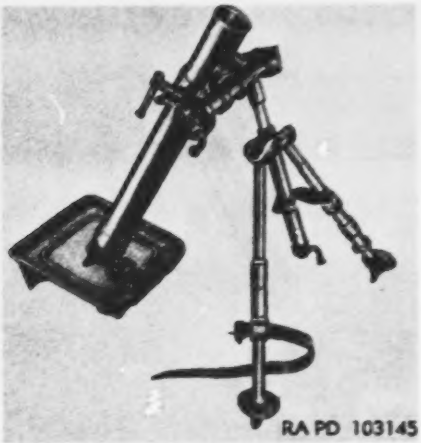
STORAGE AND SHIPMENT DATA

Within and Outside Continental United States

Shipped launchers per	
Length	
Width	
Height	
Volume	4.12 cu ft
Gross weight	78 lb
Ship tons	0.103

References: TM 9-1010-205-20P, TM 9-1010-205-34P, TM 9-1010-205-12, TM 9-1010-205-34.

MORTAR, INFANTRY: 60-MM, M2 W/E (CANNON, 60 MILLIMETER MORTAR: M2: M2; MOUNT, MORTAR: 60-MM, M5)



Major item

Model		*Line item No.*	*Federal stock No.*
Cannon	*Mount*		
M2	M5 w/animal pack transport equipment.	4-23565-15	1010-673-2007
M2	M5 w/hand carrying equipment.	4-23565-20	1010-673-2006

General

MORTAR, INFANTRY: 60-mm, M2, w/e, consisting of a CANNON, 60 MILLIMETER MORTAR: M2 with MOUNT, MORTAR: 60-mm, M5, is a smooth-bore, muzzle-loading, high-angle-of-fire weapon. The cannon is composed of a tube and a base cap containing a fixed firing pin. The cannon is mounted on the 60-mm mortar mount M5. The mount consists of a bipod and a baseplate which is provided with screw-type elevating and traversing mechanisms to lay the mortar and a spring type shock absorber to absorb the shock of recoil in firing.

Differences among models

Data plate location

Classification: Limited standard (OTCM 37119).

CHARACTERISTICS:

Cannon:
  Weight .... 12.8 lb
  Length .... 2 ft, 4⅝ in.
Mount:
  See MOUNT, MORTAR: 60-mm, M5

AMMUNITION

Types .... HE; ILLUM; SMOKE, WP; and TP

PERFORMANCE

Muzzle velocity:
  CARTRIDGE, 60-MILLIMETER: (full charge—ignition cartridge plus 4 propellent increments):
    HE (M49A2) and TP (M50A2) .... 518 fps
    SMOKE, WP (M302) .... 439 fps
    ILLUM (M83A3) .... 434 fps
  PROJECTILE, 60-MILLIMETER: training, M69
    (ignition cartridge only) .... 158.5 fps
Range (maximum) (45° elevation):
  CARTRIDGE, 60 MILLIMETER:
    HE (M49A2) and TP (M50A2) .... 1,990 yd
    SMOKE, WP (M302) .... 1,610 yd
    ILLUM (M83A3) .... 1,100 yd
PROJECTILE, 60 MILLIMETER: training,
  M69 (ignition cartridge only) .... 235 yd
Rate of fire:
  Sustained .... 18 rd per min
  Rapid .... 35 rd per min

EQUIPMENT

Sighting and fire control:*
  AIMING POST: M10
  SIGHT: M4
  TABLE, FIRING: FT 60-A-5
  TABLE, FIRING: FT 60-C-3
  TABLE, FIRING: FT 60-F-4
  TABLE, FIRING: FT 60-G-2
Basic Issue Items: See ORD 7 SNL A-43.

INSTRUCTIONAL MATERIAL

TABLE, FIRING: FT 60-L-1
PROJECTILE, 60-MILLIMETER: training, M69
TRAINER, MORTAR: subcaliber, pneumatic, M22 or M22A1

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 mortars per wood box.
  Length .... 2 ft, 9 in.
  Width .... 1 ft, 2⅛ in.
  Height .... 1 ft, 2⅛ in.
  Volume .... 3.9 cu ft
  Gross weight .... 90 lb
  Ship tons 0.10

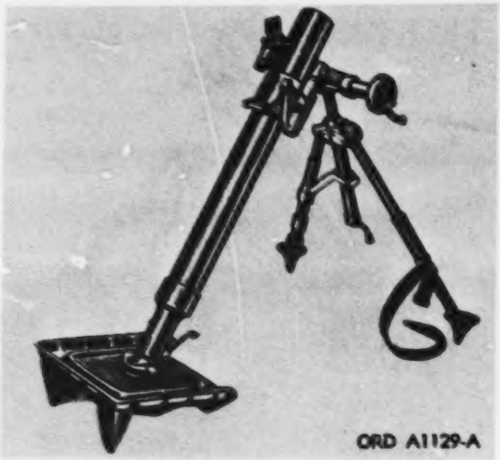
Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References: SNL A-43, TM 9-1260, TM 9-3071-1.

* For characteristics and data, see item in sections 14 and 18.

MORTAR, INFANTRY: 60-MM, M19, W/E (CANNON, 60 MILLIMETER MORTAR: M19; MOUNT, MORTAR: 60-MM, M5)


ORD A1129-A

Model		*Major item*	
Cannon	*Mount*	*Line item No.*	*Federal stock No.*
M19	M5, w/hand carrying equipment.	4-23565-40	1010-678-2010

General

MORTAR, INFANTRY: 60-mm, M19, w/e consisting of a CANNON, 60 MILLIMETER, MORTAR: M19 with MOUNT, MORTAR: 60-mm, M5, is a smooth bore, muzzle-loading, high angle-of-fire weapon. The cannon is composed of a tube, combination base cap, and firing mechanism. The base cap is hollowed and threaded to screw on the barrel. The mount consists of a bipod and a baseplate which is provided with screw-type elevating and traversing mechanisms to lay the mortar and a spring-type shock absorber to absorb the shock of recoil in firing. The cannon is used with the 60-mm mortar mount M5.

Differences among models

Data plate location

Classification: Limited standard (OTCM #7119)

CHARACTERISTICS

Cannon:

Weight	18.0 lb
Length	2 ft, 8¼ in.

Mount:

See MOUNT, MORTAR: 60-mm, M5

AMMUNITION

Types .... HE; ILLUM; SMOKE, WP; and TP

PERFORMANCE

Muzzle velocity:

CARTRIDGE, 60-MILLIMETER: (full charge ignition plus 4 propellent increments):

HE (M49A2) and TP (M50A2)	518 fps
SMOKE, WP (M302)	480 fps
ILLUM (M83A3)	484 fps

PROJECTILE, 60-MILLIMETER: training, M69 (ignition cartridge only) .... 152.5 fps

Maximum range (45° elevation):

CARTRIDGE, 60-MILLIMETER:

HE (M49A2) and TP (M50A2)	1,990 yd
SMOKE, WP (M302)	1,610 yd
ILLUM (M83A3)	1,100 yd

PROJECTILE, 60-MILLIMETER: training, M69 (ignition cartridge only) .... 285 yd

Rate of fire:

Sustained	18 rd per min
Rapid	35 rd per min

EQUIPMENT

Sighting and fire control:*

AIMING POST: M10
SIGHT: M4
TABLE, FIRING: FT 60-A-5
TABLE, FIRING: FT 60-C-3
TABLE, FIRING: FT 60-F-4
TABLE, FIRING: FT 60-G-2

Basic Issue Items: See ORD 7 SNL A-43.

INSTRUCTIONAL MATERIAL

TABLE, FIRING: FT 60-L-1
PROJECTILE, 60 MILLIMETER: training, M69
GRAPHIC TRAINING AID: GTA 9-624; GTA 7-7
TRAINER, MORTAR: subcaliber, pneumatic, M32 or M32A1

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 mortars per wood box.

Length	2 ft. 9 in.
Width	1 ft, 2¼ in.
Height	1 ft, 2¼ in.
Volume	3.9 cu ft
Gross weight	90 lb
Ship tons	0.10

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-85, SNL A-43, TM 9-1260, TM 9-3071-1.

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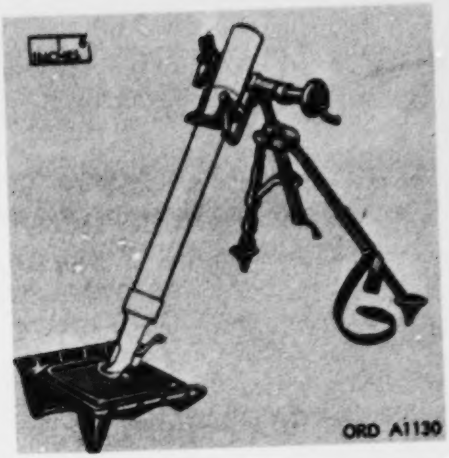
*For characteristics and data, see item in sections 14 and 18.

MOUNT, MORTAR: 60-MM, M5



Model	Secondary item Line item No.	Federal stock No.
M5	4-23565	

General

MOUNT, MORTAR: 60-mm, M5, is a mount that can be used by either the MORTAR, INFANTRY: 60-mm, M2 or M19.

The mount consists of two units—the bipod and baseplate. The bipod consists of a leg assembly, elevating mechanism assembly, and traversing assembly. The baseplate is a pressed steel body to which is welded a series of ribs and braces, a front flange, and socket.

Differences among models

Data plate location

The identification plate of the mount M5 is attached to the body yoke.

Classification: Limited Standard (OTCM 37119).

CHARACTERISTICS

Weight:	29.2 lb
Mount	16.4 lb
Bipod	12.8 lb
Baseplate	
Elevation (approx)	40° to 85°
Traverse, right or left (approx)	7°
Depression	

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-43.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount with 1 mortar M2 or 1 mortar M19 per wood box.

Length	2 ft, 9 1/16 in.
Width	1 ft, 2 3/4 in.
Height	1 ft, 3 1/8 in.
Volume	4.2 cu ft
Gross weight	75 lb
Ship tons	0.106

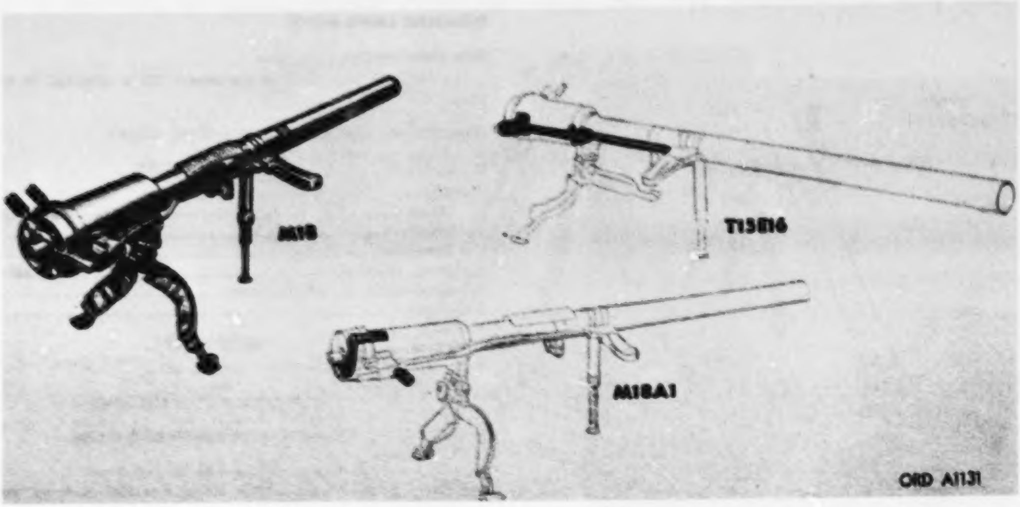
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-85, SNL A-43, TM 9-1260, TM 9-3071-1.

RIFLE, RECOILLESS, 57-MILLIMETER: M18, M18A1, OR T15E16



Model	*Major item Line item No.*	*Federal stock No.*
Rifle		
M18	4-35870-10	1010-322-9737
M18A1	4-35870-20	1010-322-9739
T15E16	4-35870-35	1010-322-9740

General

RIFLE, RECOILLESS, 57-MILLIMETER: M18, M18A1, or T15E16: is a lightweight, recoilless, portable weapon designed to be fired from the ground, or shoulders. These rifles are equipped with a manually operated breech mechanism and a percussion-type firing mechanism. They are designed for direct firing only, and sighting equipment for this purpose is furnished with each weapon. The rifle consists basically of a barrel group, a breech mechanism group, a firing cable group, a trigger mechanism group, a bipod assembly, and an extendible handle assembly.

The barrel group consists of the rifle tube and the chamber which are threaded together. Attached to the tube or chamber are the carrier hinge bracket, chamber fulcrum, and a tube fulcrum.

The breech mechanism consists of the breechlock and firing mechanism group.

The breech mechanism consists of the breechblock and firing safety grip, and trigger safety for operating the weapon.

Differences among models:

Rifles M18 and M18A1 have their chamber and breechblock handles located in different positions. The breechblock cover of the rifle M18 has been replaced on the rifle M18A1 by the breechblock operating lever from which the breechblock handle projects. The M18A1 also contains an improved sear and striker assembly for more positive operation of the rifle.

The rifle T15E16 is similar to the M18A1. The major difference between the rifles is in the linkage between the trigger mechanism group and breech mechanism group. The rifle T15E16 has a firing linkage group which contains a trigger rod, firing rod, trigger and firing rod housings, and a bellcrank. The rods and bellcrank transfer the action of the trigger to the sear in the breech mechanism group. The rifle T15E16 uses a loader's safety which is similar to the safety lever assembly at the rifles M18 and M18A1 but operates on a different principle to disrupt the continuity of the firing linkage.

Data plate location:

The rifle data are stamped on the forward surface of the chamber, directly under the tube. The tube data are stamped on the muzzle end of the rifle.

Classification: Standard B (OTCM 36841), except:

RIFLE T15E16	Limited production

CHARACTERISTICS

Rifle:	
Weight	40 lb, 4 oz
Length	5 ft, 1½ in.
Length of tube	4 ft
Rifling:	
Length	3 ft, 10½ in.
Number of grooves	24
Twist, right-hand	one turn in 30 cal.
Type of breechblock	interrupted lug
Type of firing mechanism	percussion
Estimated usable life:	
Tube and chamber	2,500 rds
Breechblock throat rings and throat blocks	500 rds
Bipod:	
Weight	(approx) 4 lb, 2½ oz

AMMUNITION

Types	Canister, HE, HEAT, WP, and TP

PERFORMANCE

Muzzle velocity:	
WP, HE, HEAT	1,200 fps
Range:	
HE (40 deg elevation)	4,930 yds
WP (39 deg elevation)	4,530 yds
HEAT (6.5 deg elevation)	2,000 yds

EQUIPMENT

Sighting and fire control *:
MOUNT SIGHT: M74C or M74
SIGHT, FRONT: M26

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* For characteristics and data, see item in sections 14 and 18.

TELESCOPE: M86F or M86C
TABLE, FIRING: FT 57-E-3 (abr)
TABLE, FIRING: FT 57-F-2 (abr)
TABLE, FIRING: FT 57-G-1 (abr)
Basic Issue Items: See ORD 7 SNL C-78

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50: ball, M2
BARREL, MACHINEGUN: modified .50 caliber (ORD No. 6535233)
GRAPHIC TRAINING AID: See DA Pam 310-5

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per box.

Length	5 ft, 9 in.
Width	1 ft, 3⅛ in.
Height	1 ft, 1⅛ in.
Volume	7.9 cu ft
Gross weight	107 lb
Ship tons	0.20

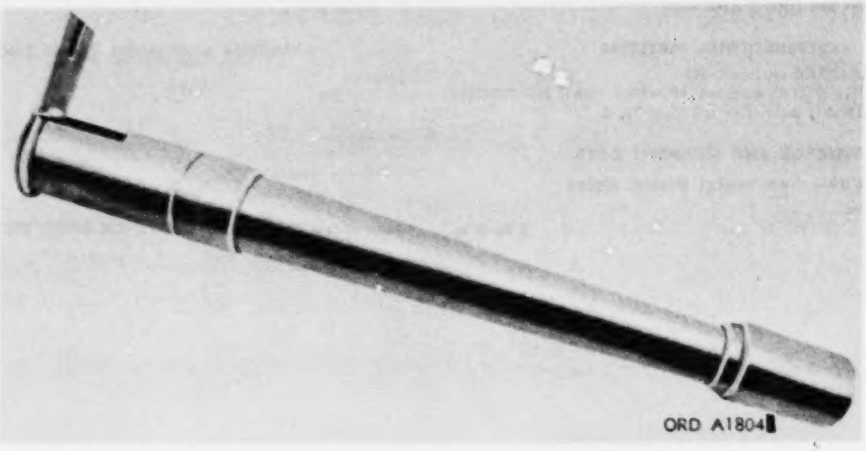
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-50, SNL C-78, TM 9-3062, TM 9-3062-34.

CANNON, 37 MILLIMETER GUN, SUBCALIBER: M15



Major Item

Model	*Line item No.*	*Federal stock No.*
M15	4-17283-	1010-672-4859

General

CANNON, 37 MILLIMETER GUN, SUBCALIBER: M15, is used for training in laying and firing of 76-mm guns. The use of smaller bore ammunition prevents wear on the regular piece during practice and is less costly. The subcaliber gun cannon is a single-shot, hand-loaded weapon, consisting of a tube, deflector, extractor, and lock assembly. The tube has an enlarged portion near the chamber end which acts as a rear adapter to center the cannon in the chamber of the 76-mm gun, and a combination front adapter and gas deflector which is screwed on at the muzzle end of the tube. The tube is secured longitudinally by a lock which fits in a transverse keyway at the rear of the subcaliber tube and the lock is secured to the breech ring by a screw. The extractor, a sliding cylindrical sleeve, encases the rear end of the tube. The rear end of the sleeve is counterbored for the rim of a 37-mm cartridge. A rim extending more than halfway around the rear of the extractor is engaged by the extractors of the 76-mm gun in the same manner as the rim of a 76-mm cartridge case. The left rear portion of the extractor is cut away to clear the lock during extraction. Percussion is obtained by operation of the firing mechanism of the 76-mm gun, which actuates its firing pin, causing it to strike the primer of the 37-mm cartridge.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Weight	
Length:	
Overall	2 ft, 8 3/16 in.
Tube	2 ft, 5 1/16 in. or 20 calibers
Rifling:	
Length	
Twist, right-hand	one turn in 25 calibers
Number of grooves	

AMMUNITION

Type	TP
Cartridge	M63 Mod 1

PERFORMANCE

Muzzle velocity	1,100 fps
Range (maximum)	4,980 yd

EQUIPMENT

Sighting and Fire Control:
TABLE, FIRING: FT 37-BA-2 (abridged)
In addition to above equipment, use sighting equipment issued with primary weapon listed in "GENERAL" paragraph.
Basic Issue Items: See ORD 7 SNL C-33, Sec. 17

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

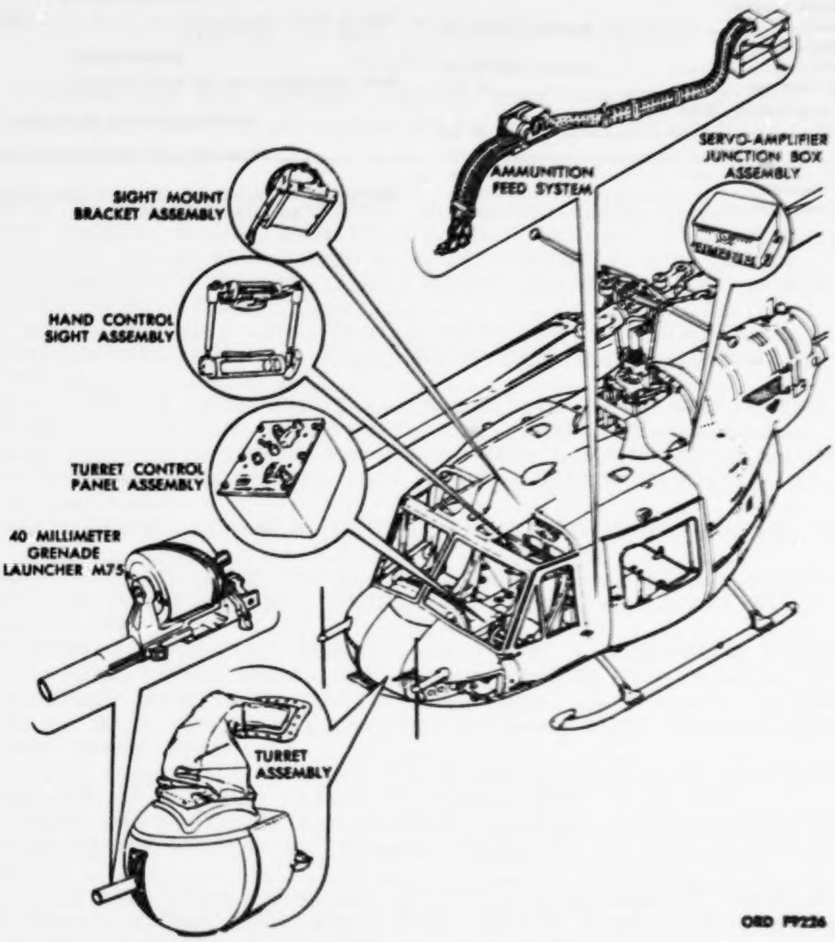
Shipped	subcaliber gun cannons.
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	subcaliber gun cannons.
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL C-33, TM 9-308.

ARMAMENT SUBSYSTEM, HELICOPTER, 40-MILLIMETER GRENADE LAUNCHER: M5 (LAUNCHER, GRENADE, 40-MILLIMETER: M75; MOUNT, GRENADE LAUNCHER (11014999))


AMMUNITION FEED SYSTEM
SERVO-AMPLIFIER JUNCTION BOX ASSEMBLY
SIGHT MOUNT BRACKET ASSEMBLY
HAND CONTROL SIGHT ASSEMBLY
TURRET CONTROL PANEL ASSEMBLY
40 MILLIMETER GRENADE LAUNCHER M75
TURRET ASSEMBLY

ORD FF226

Model	*Major item Line item No.*	*Federal stock No.*
M5	A90460	1010-738-8811

General

ARMAMENT SUBSYSTEM, HELICOPTER, 40-MILLIMETER GRENADE LAUNCHER: M5 is designed for installation on UH–1B helicopters. The subsystem, electrically powered and remotely controlled, launches antipersonnel type grenades from a turret assembly externally mounted on the helicopter nose. The subsystem consists of the LAUNCHER, GRENADE, 40-MILLIMETER: M75 * mounted in a turret assembly, with an ammunition feed system, turret control panel assembly, servo-amplifier junction box assembly, sight mount bracket assembly, and the hand control sight assembly. The copilot-gunner uses the hand control sight assembly to control and direct grenade launcher fire, independently of the helicopter attitude. The turret assembly provides a field of fire ranging from plus 15° to minus 35° in elevation, and from 60° left to 60° right in azimuth. When the subsystem is energized and the hand control sight assembly is not in use, the turret assembly returns to zero azimuth and zero elevation, or "stow" position. When in "stow" position, the grenade launcher may be fired by pilot or copilot from a switch on either cyclic stick as the helicopter is maneuvered to aim the machineguns.

Differences among models

Data plate location:

The subsystem data plate is attached to the back of the turret assembly, in the upper left corner. Individual component data plates are attached to the left front side of the grenade launcher receiver assembly, the under side of the mount portion of the hand control sight assembly, the rear side of the servo-amplifier junction box assembly, the upper rear surface of the turret control panel bracket, and to the sprocket cover of the ammunition booster assembly.

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* Characteristics and data will be added at a later date.

Classification: Standard A (AMCTC item 02177).

CHARACTERISTICS

Mount, grenade launcher:	
Weight (w/grenade launcher, w/o ammunition)	(approx) 194.75 lb
Weight (w/grenade launcher, w/ammunition)	(approx) 258.75 lb
Turret assembly diameter	22 in.
Launcher, grenade, 40-millimeter: M75:	
Weight	27 lb
Height	9 in.
Width	8 in.
Length (barrel extended)	22.5 in.
Length (barrel retracted)	18 in.
Barrel length	13.7 in.
Percussion	mechanical

AMMUNITION

40-millimeter	capacity 150 rds
Types	HE, practice

PERFORMANCE

Rate of fire	225-230 rds per min

EQUIPMENT

Basic Issue Items: See TM 9-1010-207-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-1010-207-12, TM 9-1010-207-35, TM 9-1010-207-ESC, TM 55-1520-211-10.

SECTION 4

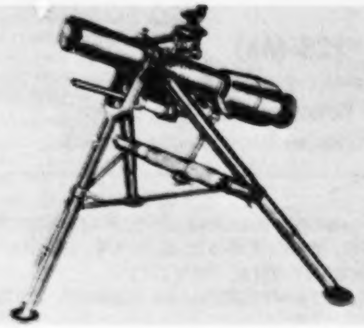
GUNS, 75-MM THROUGH 125-MM

(CLASS 1015)

(Includes gun and howitzer cannons, guns, howitzers, artillery and infantry mortars, gun and mortar mounts, and rifles and subcaliber rifles.)

Page
BATTLE GROUP ATOMIC WEAPON SYSTEM: M28 (XM28) (GUN, RECOILLESS, 120-MILLIMETER: M63 (XM63E1) W/GUN, 20-MILLIMETER, SPOTTING: M69 (XM69); MOUNT, TRIPOD, RECOILLESS GUN: 120-mm, M120 (XM120) or MOUNT ASSEMBLY: M131 (XM131) 4–2
CANNON, 76-MILLIMETER GUN: M32 (T91E3); MOUNT GUN: M76 (T138E1) or MOUNT, COMBINATION GUN: M76A1 (T138E2) 4–3
CANNON, 90-MILLIMETER GUN: M36 (T119E1); MOUNT, GUN: 90-mm combination, M78 4–5
CANNON, 90-MILLIMETER GUN: M41 (T139); MOUNT, GUN: 90-mm combination, M87 (T148) or ORD No. 8733943 4–7
CANNON, 90-MILLIMETER GUN: M54 (T125); MOUNT, GUN: 90-mm, M88 (T170E1) 4–9
CANNON, 105-MILLIMETER GUN: M68 (T254E2); MOUNT, GUN: 105-mm combination, M116 4–10
CANNON, 105-MILLIMETER HOWITZER: M49 (T96E1); MOUNT, HOWITZER: 105-mm, M85 (T67E1) 4–12
CANNON, 105-MILLIMETER HOWITZER: M103 (XM103); MOUNT, HOWITZER: 105-mm, M139 (XM139) (See page 4–44).
CANNON, 120-MILLIMETER GUN: M58 (T123E1); MOUNT, GUN: 120-mm, combination, M89 (T154) or M89A1 4–14
GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51, w/e (CANNON: 75-mm, automatic gun, M35 (T83E6 or T83E7); RECOIL MECHANISM: T47E2 or M29 (T47E3); MOUNT, GUN: 75-mm, AA, M84 (T69)) 4–16
GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-mm, M117, w/e (CANNON, 90-MILLIMETER GUN: M1A2 or M1A3; RECOIL MECHANISM: M1-series; MOUNT, GUN: 90-mm, M1A2) 4–18
GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-mm, M118, w/e (CANNON, 90-MILLIMETER GUN: M2A1 or M2A2; RECOIL MECHANISM: M17-series; FUZE, SETTER-RAMMER, M20; MOUNT, GUN: 90-mm, M2A1) 4–20
HOWITZER, PACK: 75-mm, M116, w/e (CANNON, 75 MILLIMETER PACK HOWITZER: M1A1; RECOIL MECHANISM: M1-series; CARRIAGE: howitzer (pack), 75-mm, M8) 4–22
HOWITZER, LIGHT, TOWED: 105-mm, M101 or M101A1 (CANNON, 105 MILLIMETER HOWITZER: M2A1 or M2A2; RECOIL MECHANISM: M2-series; CARRIAGE, 105 MILLIMETER HOWITZER: M2A1 or M2A2) 4–24
HOWITZER, SALUTING: 75-mm, M120, w/e (CANNON, 75-MILLIMETER PACK HOWITZER: SALUTING, M1A1C; RECOIL MECHANISM, 75-MILLIMETER PACK HOWITZER: SALUTING, M1A4C or M1A6C; CARRIAGE, 75 MILLIMETER PACK HOWITZER: M8) 4–26
MORTAR, 81 MILLIMETER: M1, w/e (CANNON, 81 MILLIMETER MORTAR: M1; MOUNT, MORTAR: 81-mm, M4) 4–28
MORTAR, 81 MILLIMETER, M29 and M29E1, w/e (CANNON, 81-mm, M29 or M29E1; MOUNT, MORTAR: 81-mm, M23 or M23A1) 4–30
MORTAR, 107 MILLIMETER: M30 (T104), w/e (CANNON, 107 MILLIMETER MORTAR: M30 (T104); MOUNT, MORTAR: 107-mm, M24 (T61), M24A1, or (ORD No. 8731738) (formerly 4.2-inch)) 4–32
MOUNT, TRIPOD, RIFLE: M1917A2, w/e 4–34
RIFLE, 75 MILLIMETER: M20 or T21E12; MOUNT, TRIPOD, WEAPON: M1917A2 or M74, w/e 4–35
RIFLE, 90 MILLIMETER: M67, w/e 4–37
RIFLE, 105 MILLIMETER: M27 or M27A1; MOUNT, RIFLE: 105-mm, M75 or M75A1, w/e 4–38
RIFLE, RECOILLESS, 106 MILLIMETER: M40A1 or M40A1C; w/GUN, CALIBER .50, SPOTTING: M8C; MOUNT, RIFLE: 106-mm, M79, M92 (T173) or M149E5 4–40
RIFLE, CALIBER .30, SUBCALIBER: M7 4–42
RIFLE, CALIBER .30, SUBCALIBER: M9 4–43

BATTLE GROUP ATOMIC WEAPON SYSTEM: M28 (XM28) (GUN, RECOILLESS, 120-MILLIMETER: M63 (XM63E1) W/GUN, 20-MILLIMETER, SPOTTING: M69 (XM69); MOUNT, TRIPOD, RECOILLESS GUN: M120 (XM120) OR MOUNT ASSEMBLY: M131 (XM131)



SHOWN: GUN, RECOILLESS, 120 MILLIMETER
M63 W/GUN, SPOTTING, 20 MILLIMETER
M69, MOUNT, TRIPOD, RECOILLESS
GUN M120

SHOWN: GUN, RECOILLESS, 120 MILLIMETER
M63 W/GUN,
SPOTTING, 20 MILLIMETER M69, MOUNT,
GUN M131 ON TRUCK,
UTILITY: 1/4-TON, 4x4, M151

ORD A2061

Major Item

Model	*Line item No.*	*Federal stock No.*
GUN, M63, w/e	4-17150-10	1015-690-2133
GUN, M63		1015-766-6349
GUN, M69		1005-690-3302
MOUNT ASSEMBLY, M131		1015-790-3601

General

BATTLE GROUP ATOMIC WEAPON SYSTEM: M28 (XM28) (GUN, RECOILLESS, 120-MILLIMETER: M63 (XM63E1) W/GUN, 20-MILLIMETER, SPOTTING: M69 (XM69); MOUNT, TRIPOD, RECOILLESS GUN: M120 (XM120) or MOUNT ASSEMBLY: M131 (XM131)* is a smooth bore, lightweight, short range, man or vehicle transported, frontline infantry weapon, with a nuclear capability, and can be fired from a ground mount or vehicle.

The 120-mm recoilless gun M63 consists of three parts permanently assembled: barrel, chamber, and nozzle.

The 20-mm spotting gun M69 is a single-shot, breech-loading weapon, with a manually-operated, vertical sliding wedge breechlock. It has a rifled barrel which is threaded and screwed into the breech housing. It is mounted coaxially under the recoilless gun in the spotting mount.

The 120-mm recoilless gun tripod mount M120 consists of two rear legs and one front telescoping-type leg joined at the outer gimbal ring.

An adapter kit is provided for the weapon system M28. It consists of brackets and supports bolted to TRUCK, UTILITY: ¼-ton, 4 x 4, M151.** The brackets and supports are equipped with straps for securing the mount M120, ammunition, and equipment for transportation. The 120-mm recoilless gun vehicle mount M131 is furnished with the kit and mounts the gun M63 for transportation and for firing from the truck.

Differences among models

Data plate location

Gun, M63—On the spotting gun bracket beneath the gun barrel.
Gun, M69—Stamped on the right side of the breech housing.
Mount, tripod M120—On the right side of the front leg yoke.
Mount assembly, M131—On the left side of the mount.

Classification: Standard A (AMCTCM 279)

Weapon system (w/M120 mount):	
Weight	110¼ lb
Length	5 ft, ⅞ in.
Width	5 ft, 4 in.
Height	3 ft, 9 in.
Gun, M63:	
Weight	77 lb
Length	approx 5 ft, 7/16 in.
Gun, M69:	
Weight	7 lb
Length	2 ft, 3½ in.
Type of breech mechanism—vertical sliding wedge	
Type of firing mechanism	inertia percussion
Mount, M120:	
Weight	26¼ lb
Height (assembled):	
Low silhouette	2 ft, 10 in.
High silhouette	4 ft, 7 in.
Length (folded)	4 ft, 1⅝ in.
Mount assembly M131:	
Weight	84 lb
Length	2 ft, 3 in.
Width	10½ in.
Height	1 ft, 5½ in.

AMMUNITION

Gun, M63, types	nuclear, practice, dummy, training
Gun, M69, types	dummy, spotting

PERFORMANCE

Muzzle velocity	(classified)
Range	2,000 meters
Rate of fire	

EQUIPMENT

Sighting and fire control:***
HOLDER, TELESCOPE MOUNT: M5 (XM5).

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* Characteristics and data will be included at a later date.

** Mount assembly M131 installed on utility truck M38A1D prior to issue to using units. Not issued as a component of first echelon equipment.

*** For characteristics and data, see item in section 14, 18, and 28.

MOUNT, TELESCOPE: M117 (XM117).
POST, AIMING: M1A2.
QUADRANT, FIRE CONTROL: gunner's, M1A1, w/CASE, CARRYING.
SIGHT, BORE: MUZZLE, M50 (XM50) (for 20-mm gun).
TELESCOPE, ELBOW: M107 (XM107).
THERMOMETER, SELF-INDICATING, BIMETALLIC: M1A1, w/e.

Auxiliary sighting and fire control:

CASE, CARRYING: M120 (for M50 bore sight).
CASE, TELESCOPE: M121.
CHEST, M14 (aiming post light M14).
LIGHT, AIMING POST: M14.
LIGHT, INSTRUMENT: M58.
AIMING CIRCLE: M2, w/e.
BINOCULAR: M13A1, w/e.
BROAD, PLOTTING: M16, w/e.
COMPASS, MAGNETIC, UNMOUNTED: M2, w/e.

Boresighting:

CASE, BORESIGHT: M122 (for M47 and M48 bore sights).
SIGHT, BORE, BREECH: M47 (XM47) (for 120-mm gun).
SIGHT, BORE, MUZZLE: M48 (XM48) (for 120-mm gun).

Basic Issue Items: See TM 9-1000-209-12.

INSTRUCTIONAL MATERIAL

CARTRIDGE, SPOTTING, 20-MILLIMETER, DUMMY: M147 (XM147).
CHARGE, PROPELLING, ATOMIC PROJECTILE, DUMMY: M78 (XM78E1).
PISTON, LAUNCHING, ATOMIC PROJECTILE, DUMMY: M3 (XM3).
PROJECTILE, ATOMIC, SUPERCALIBER, 279-MILLIMETER, DUMMY: M421 (XM421).

STORAGE AND SHIPMENT DATA

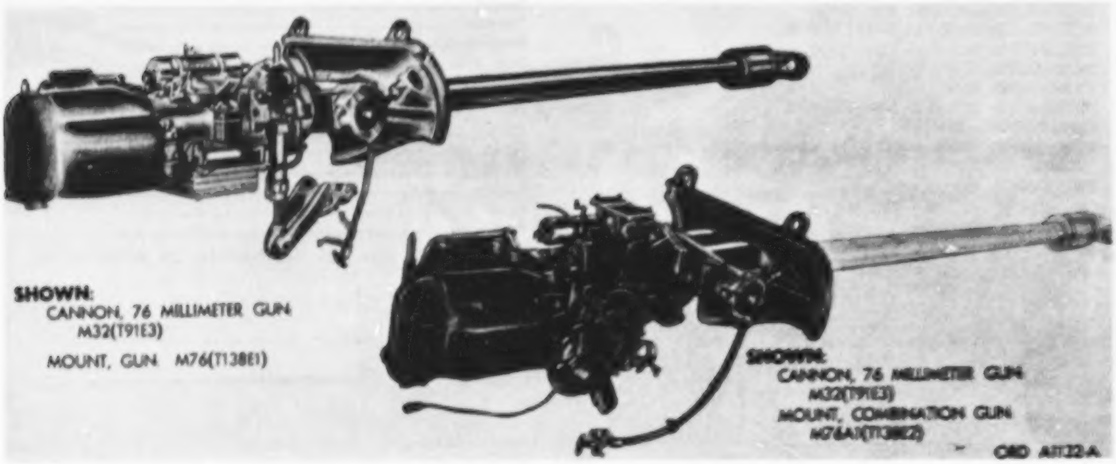
Within and Outside Continental United States

Shipped 1 weapon system per shipping container.

Length	5 ft. 4 in.
Width	2 ft
Height	3 ft. 4⅝ in.
Volume	30.10 cu ft
Gross weight	415 lb
Ship tons	0.97

References: TM 9-1000-209-12, TM 9-1000-209-14(C), TM 9-1000-209-20P, TM 9-1000-209-35, TM 9-1000-209-35P

CANNON, 76-MILLIMETER GUN: M32 (T91E3); MOUNT, GUN: M76 (T138E1) OR MOUNT, COMBINATION GUN: M76A1 (T138E2)


SHOWN:
CANNON, 76 MILLIMETER GUN M32(T91E3)
MOUNT, GUN M76(T138E1)
SHOWN:
CANNON, 76 MILLIMETER GUN M32(T91E3)
MOUNT, COMBINATION GUN M76A1(T138E2)
ORD A1122-A

Model		*Secondary item* *Line item No.*	*Federal stock No.*
Cannon	*Mount*		
M32			1015-723-8793
	M76		1015-740-4933
	M76A1		1015-883-8999

General

CANNON, 76-MILLIMETER GUN: M32 (T91E3) with MOUNT, GUN: M76 (T138E1) or MOUNT, COMBINATION GUN: M76A1 (T138E2), provides the major armament for the 76-mm full tracked combat tanks M41 and M41A1, respectively.

The principal components of the 76-mm gun cannon M32 are the cannon tube, muzzle brake, bore evacuator chamber, and breech mechanism assembly.

The gun mount M76 or combination gun mount M76A1 consists primarily of a shield assembly and recoil cylinder assembly. The mount supports the cannon and provides attachment for the breech operating mechanism assembly, firing plunger assembly, manual firing and safety mechanism assembly (M76A1), hand firing control assembly (M76), machinegun mounting brackets, recoil guard, replenisher assembly, elevating cylinder assembly (M76), and the elevating gear box assembly (M76A1).

Differences among models

The principal differences between the mounts M76 and M76A1 are that the M76 has a hydraulic elevating cylinder assembly and related parts where the M76A1 has an electro-mechanical elevating gear box assembly and related parts. The mounting pads on the outside of the recoil cylinder are designed for mounting the elevating cylinder assembly on M76 and the elevating gear box assembly on M76A1. The mounting position for the telescope is different on each model. All mounts M76 and mounts M76A1 retain an early type trunnion left cap which does not have an adjustable plate and level vial attached thereto.

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Cannon:
- Weight ....1,820 lb
- Weight of tube ....952 lb
- Length (muzzle to rear face of breech ring) ....15 ft. 7 in.
- Length of tube (muzzle to breech face of tube) ....13 ft

Rifling:
- Length ....13 ft. ⅝ in.
- Number of grooves 28
- Twist, right hand ....one turn in 25 calibers
- Type of breechblock ....vertical sliding
- Type of firing mechanism ......spring actuated, inertia percussion
- Estimated accuracy life of tube..350 equivalent full charge rounds

Mount:
- Weight:
  - M76 ....1,277 lb
  - M76A1 ....1,307 lb
- Type of recoil mechanism ....concentric hydrospring
- Length of recoil:
  - Maximum ....1 ft
  - Normal ....9 to 10¾ in.
- Number of recoil cylinders 1
- Capacity of recoil mechanism (including replenisher assembly) ....2⅝ gal
- Elevation (max) ....(approx) 19 deg. 45 minutes
- Depression (max) ....(approx) 9 deg. 45 minutes
- Operation of firing linkage ....manual or electrical

AMMUNITION

Types...AP-T, HE, HVAP-T, HVAP-DS-T, WP, TP-T, and BLANK

PERFORMANCE

Muzzle velocity:
- AP-T, TP-T ....3,200 fps
- HVAP-DS-T ....4,125 fps
- HVAP-T ....4,135 fps
- HE, WP ....2,400 fps

Range:
- AP-T, TP-T (2-deg 16 min elevation) ....5,000 yd
- HVAP-DS-T (1-deg 8 min elevation) ....5,000 yd
- HVAP-T (2-deg 28 min elevation) ....5,000 yd
- HE, WP (44-deg 19 min elevation) ....15,650 yd

Rate of fire ....

EQUIPMENT

Sighting and fire control:*

DRIVE, BALLISTICS: M4 (T23)
FUZE SETTER: M27 or M14
INDICATOR, AZIMUTH, MECHANICAL: M31 (T24)
MOUNT, PERISCOPE: M93 (T176E1)
MOUNT, PERISCOPE: M94 (T177E2)
MOUNT, TELESCOPE: M92 (T178)
MOUNT, TELESCOPE: M92A1 (T178E1)
PERISCOPE: M18
PERISCOPE: M17
PERISCOPE: M19
PERISCOPE: M20A2 or M20A1 or M20
PROJECTION—SYSTEM: (FSN 1290-759-7856)
QUADRANT, FIRE CONTROL: gunner's, M1A1 or M1 W/ CASE.
TELESCOPE: M97

Basic Issue Items: See TM 9-2350-201-12.

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* For characteristics and data, see item in sections 12, 14, 18, and 27.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

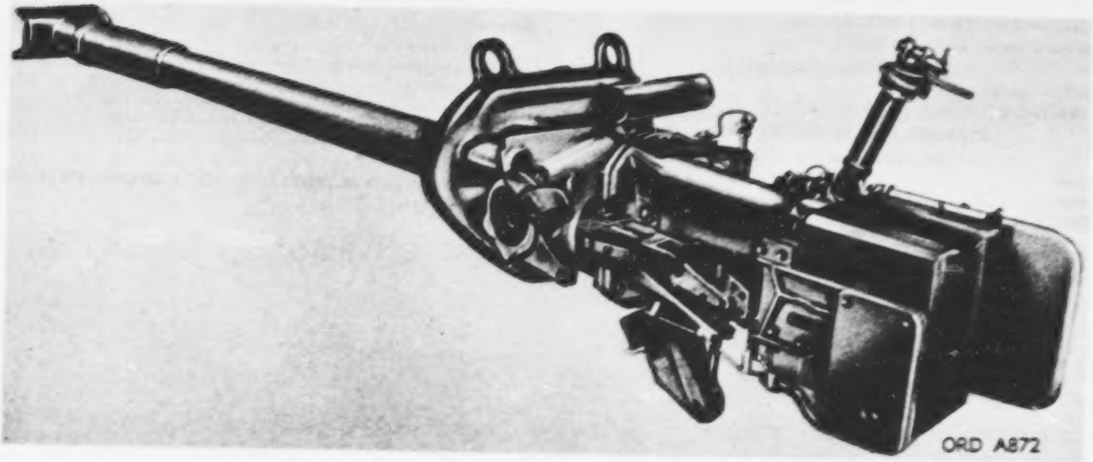
Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL C-82, TM 9-2350-201-12, TM 9-1015-218-35.

CANNON, 90-MILLIMETER GUN: M36 (T119E1); MOUNT, GUN: 90-MM COMBINATION, M78



Model		*Secondary item*	
Cannon	*Mount*	*Line item No.*	*Federal stock No.*
M36			1015-723-8850
	M78		1015-788-9220

General

CANNON, 90-MILLIMETER GUN: M36 (T119E1) with MOUNT, GUN: 90-mm combination, M78, provides the major armament of TANK, COMBAT, FULL TRACKED: 90-mm gun, M47.

The cannon is a flat trajectory artillery weapon. It uses fixed ammunition which is loaded into the gun manually. The loading of a round permits a closing spring mechanism to close the breech. The breech is opened automatically during counterrecoil of the gun, extracting the empty shell case. The principal components of the cannon are the gun tube, blast deflector, evacuator chamber, and the breech mechanism assembly with related parts.

The mount consists primarily of a shield group and the recoil mechanism assembly. In addition, it provides attachment for the emergency hand elevating screw assembly and the gun elevating cylinder assembly.

Differences among models

Data plate location

The combination gun mount identification plate is located on the right side of the gun mount below the gun firing relay.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Cannon and mount:
- Overall:
  - Length ---------- 16 ft, 11⅝ in.
  - Width ---------- 2 ft, 6 in.
  - Height ---------- 2 ft, 9 in.

Cannon:
- Weight (complete) ---------- 2,650 lb
- Weight of tube ---------- 1,750 lb
- Length (blast deflector to rear face of breech ring) ---------- 16 ft, 1⅝ in.
- Length of tube ---------- 14 ft, 9 in.
- Rifling:
  - Length ---------- 152.77 in.
  - Number of grooves ---------- 32
  - Twist, right hand ---------- one turn in 25 caliber
- Type of breechblock ---------- vertical sliding
- Type of firing mechanism ---------- spring-actuated inertia percussion
- Estimated accuracy life of tube ---------- 700 equivalent full charge rounds

Mount:
- Weight (approx) ---------- 2,000 lb
- Type of recoil mechanism ---------- concentric hydrospring
- Number of recoil cylinders ---------- 1
- Length of recoil:
  - Normal ---------- 1 ft
  - Maximum ---------- 1 ft, 2 in.
- Capacity of recoil mechanism (including replenisher assembly) ---------- 6 gal
- Elevation (max) ---------- 19° (338 mils)
- Depression (max) ---------- 5° (89 mils)
- Operation of firing linkage ---------- manual or electrical

AMMUNITION

Types ---------- AP-T, HE-T, TP-T, and smoke (WP-T)

PERFORMANCE

Muzzle velocity:
- AP-T ---------- 3,000 fps
- HE-T ---------- 2,400 fps

Range:
- AP-T ---------- 15,980 yd
- HE-T ---------- 14,000 yd

Rate of fire:
- Sustained speed ---------- 8 rd per min
- Rapid ---------- 16 rd per min

EQUIPMENT

Sighting and firing control:*
- Installed on tank M47 prior to issue:
  - DRIVE, BALLISTICS: M3
  - INDICATOR, AZIMUTH, MECHANICAL: M31
  - INVERTER, ORD No. 7633698
  - MOUNT, PERISCOPE: M88
  - MOUNT, PERISCOPE: M89
  - QUADRANT, FIRE CONTROL: elevation, M13
  - RANGE FINDER, FIRE CONTROL: M12
  - TRANSMITTER, SUPERELEVATION: M22

* For characteristics and data, see item in sections 14, 18, and 27.

Boxed and stowed in tank M47 prior to issue:
- FIRING, TABLE: 90-F-2 (abridged)
- FUZE SETTER: M27 or M14
- PERISCOPE, M13
- PERISCOPE, M19
- PERISCOPE, M20A3, M20, or M20A1
- QUADRANT, FIRE CONTROL: gunner's, M1A1 or M1

Basic Issue Items: See TM 9-2350-200-12.

INSTRUCTIONAL MATERIAL

Subcaliber equipment:
- MACHINEGUN: cal. .30, M1919A4E1

STORAGE AND SHIPMENT DATA

Within Continental United States

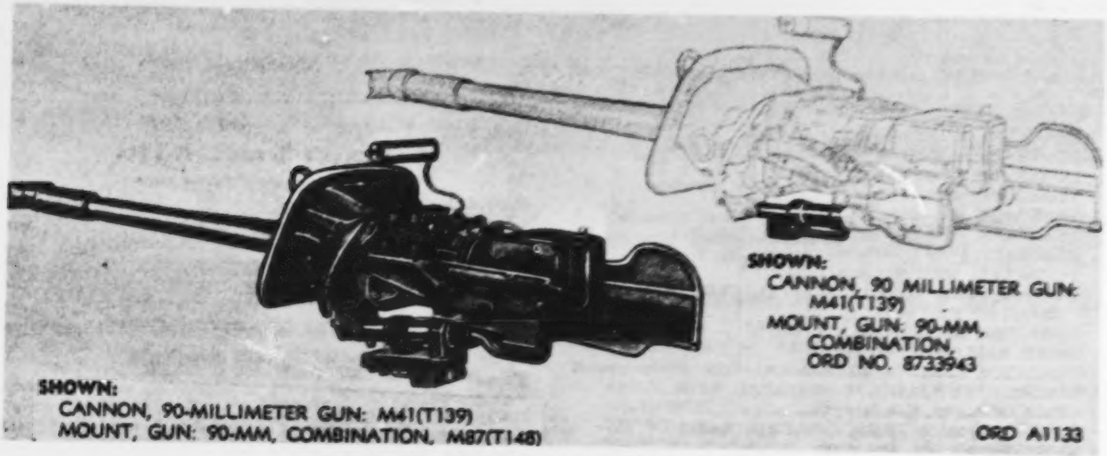
Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL D-52, SNL D-[illegible], TM 9-1874AA, TM 9-1015-214-34.

CANNON, 90-MILLIMETER GUN: M41 (T139); MOUNT, GUN: 90-MM COMBINATION, M87 (T148) or ORD NO. 8733943



SHOWN:
CANNON, 90 MILLIMETER GUN: M41(T139)
MOUNT, GUN: 90-MM, COMBINATION, ORD NO. 8733943

SHOWN:
CANNON, 90-MILLIMETER GUN: M41(T139)
MOUNT, GUN: 90-MM, COMBINATION, M87(T148)

ORD A1133

Model		*Secondary item*	
Cannon	*Mount*	*Line item No.*	*Federal stock No.*
M41			1015-780-5111
	M87		1015-786-8974
	ORD No. 8733943		

General

CANNON, 90-MILLIMETER GUN: M41 (T139) with MOUNT, GUN: 90-mm combination, M87 (T148), provides the major armament for the TANK, COMBAT, FULL TRACKED: 90-mm, M48, M48A1, or M48C.

The CANNON, 90-MILLIMETER GUN: M41 (T139) with MOUNT, GUN: 90-mm combination, ORD No. 8733943, provides the major armament for the TANK, COMBAT, FULL TRACKED: 90-mm, M48A2, M48A2C.

The cannon consists of a tube, evacuator chamber, blast deflector, and breech mechanism assembly. The weapon is supported on two trunnions in the tank turret, which contains the operating controls and equipment for the weapon.

The combination gun mount supports the cannon in battery, recoil, and counterrecoil. It pivots in elevation and depression on the trunnion bearings. The major components of the combination gun mount are the gun mount shield assembly, the breech operating lever assembly, the concentric recoil mechanism assembly, the cal. .30 machinegun cradle assembly, and the elevating mechanism assembly.

Differences among models

The combination gun mount ORD No. 8733943 is a modified M87. It differs from the M87 in that the recoil mechanism assembly and cradle assembly were modified, and the splatter guards with their attaching hardware were eliminated on later models. A different elevating mechanism assembly is used in conjunction with combination gun mount ORD No. 8733943.

Elevating mechanism assembly ORD No. 7971087 is used in conjunction with combination gun mount ORD No. 8733943. However, four different models of the elevating mechanism assembly may be used in conjunction with combination gun mount M87. Elevating mechanism assembly ORD No. 7997599 is the original model used with the weapon in the tank M48. Elevating mechanism assembly ORD No. 8370388, developed from ORD No. 7997599, has increased flange thickness of the front housing, relocated preformed packing, backup rings for the packing, and preformed packing for the piston rod rear guide. Elevating mechanism assembly ORD No. 8382217, developed from elevating mechanism assembly ORD No. 8370388, has the manifold needle valve removed and replaced with packing and plug to close the bore. Elevating mechanism assembly ORD No. 8686541 has rear housing flanges that do not contain ports.

Data plate location

The model and serial numbers of the cannon are stamped on the top of the breech ring. The identification plate of the gun mount is located on the right side of the cradle.

Classification: Standard A (OTCM 36641).

CHARACTERISTICS

Cannon:	
Weight	2,370 lb
Weight of tube	1,582 lb
Length (muzzle to rear face of breech ring w/blast deflector)	16 ft. 1¼ in.
Rifling:	
Length	12 ft. 8¾ in.
Number of grooves	32
Twist, right hand	one turn in 25 calibers
Type of breechblock	vertical sliding
Type of firing mechanism	inertia percussion
Estimated accuracy life of tube	700 equivalent full charge rounds
Mount:	
Weight:	
(less elevating mechanism)	2,945 lb
(including elevating mechanism)	3,007 lb
Type of recoil mechanism	concentric hydrospring
Number of recoil cylinders	1
Length of recoil:	
Normal	1 ft
Maximum	1 ft. 1½ in.
Capacity of recoil mechanism (incl. replenisher)	5.5 gal
Elevation (max)	19°
Depression (max)	9°
Traverse	360°
Operation of firing linkage	manual or electric

AMMUNITION

Types—AP-T, APC-T, HE, HE-T, HEP-T, WP-T, TP-T, and HEAT-T

PERFORMANCE

Muzzle velocity:	
AP-T (M318A1C)	2,800 fps
HE-T (M71A1)	2,400 fps
HEP-T (T142E3)	2,600 fps

Range:

AP-T (M318A1C)	21,400 yd
HE-T (M71A1)	14,000 yd
HEP-T (T142E3)	10,700 yd

Rate of fire ----------

EQUIPMENT

Sighting and fire control:*

Used with TANK, COMBAT, FULL TRACKED: 90-mm, M48, M48A1, M48C, M48A2, M48A2C.
FUSE SETTER: M14, M27
INDICATOR, AZIMUTH: M28A1 (T28E1)
MOUNT, PERISCOPE: M102A1 (T184)
MOUNT, TELESCOPE: M108 (T181)
PERISCOPE: M20A1
PERISCOPE: M27 (T36)
QUADRANT, FIRE CONTROL: ELEVATION, M13
QUADRANT, FIRE CONTROL: gunner's, M1, M1A1
TELESCOPE: M97C (T156E1)

Used with TANK, COMBAT, FULL TRACKED: 90-mm, M48, M48A1, and M48C only.
COMPUTER, BALLISTICS: M13 (T31)
DRIVE, BALLISTICS: M5 (T24E2)
INDICATOR, AZIMUTH, MECHANICAL: M28
MOUNT, TANK PERISCOPE: M104 (T195)
PERISCOPE: M17, M19, M26 (T25)
RANGE FINDER, FIRE CONTROL: M13 (T46E1)
SIGHT, PERISCOPE: M25 (T42)

Used with TANK, COMBAT, FULL TRACKED: 90-mm, M48A2, M48A2C.
CARD, RANGE, TANK: (no data available)
COMPUTER, BALLISTICS: M13A1
DRIVE, BALLISTICS: M5A1 (T24E5)
FINDER, RANGE: M13A1
MOUNT, TANK PERISCOPE: M104A1
PERISCOPE: M20A3
PERISCOPE: M24 (T41)
SIGHT, PERISCOPE: M28 (T46)

Basic Issue Items: See TM 9-7022, C4

INSTRUCTIONAL MATERIAL

CARTRIDGE, 90-MILLIMETER DUMMY: M12B2

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

References: TM 9-7012, TM 9-7022, TM 9-1015-219-35, TM 9-1015-219-35P.

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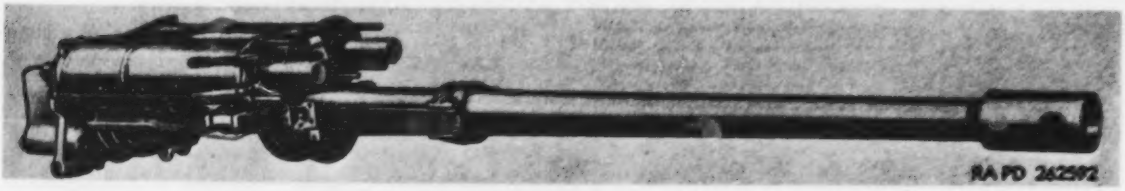
* For characteristics and data, see item in sections 12, 14, 15, 18, and 27.

CANNON 90-MILLIMETER GUN: M54 (T125); MOUNT, GUN: 90-MM, M88 (T170E1)



Model *Cannon*	 *Mount*	*Secondary item* *Line item No.*	*Federal stock No.*
M54			1015–586–7781
	M88		

General

CANNON, 90-MILLIMETER GUN: M54 (T125) with MOUNT, GUN: 90-mm, M88 (T170E1), provides the major armament for the GUN, SELF-PROPELLED, FULL-TRACKED: 90-mm, M56. The cannon and mount combination is a high velocity weapon designed primarily for the M56 as an antitank weapon. It may be fired electrically by depressing a button on the traverse handwheel or mechanically by operating a lever attached to the right side of the front frame.

The cannon consists of three major parts: breech mechanism, tube, and tube support rails. The tube is screwed into the breech ring and has a counterweight at the muzzle end. The breech mechanism is opened manually for the first round by depressing the plunger at the top of the handgrip and pulling downward on the operating handle. Thereafter, the breech is opened, the cartridge case is extracted, the percussion mechanism is cocked, and the breechblock is left in the open position through action imparted during counterrecoil. The cannon is then ready for loading the next round. Each round is loaded manually by the loader.

The gun mount M88 is trunnion-mounted to the top carriage, and supports and guides the 90-mm gun M54. It consists of a large welded housing assembly supported underneath by front and rear cross bridge assemblies. It mounts the recoil mechanism, buffer assembly and hydraulic system, hand firing and safety levers, firing linkage, gun blast shield, telescope, and facilities to attach the upper end to the elevating screw.

Differences among models

Data plate location

The model and serial numbers of the gun are stamped on the forward portion of the top of the breech ring. The mount identification plate is located on the front cross frame.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Cannon:	
Weight (w/counterweight)	2,440 lb
Weight of tube	1,473 lb
Length	15 ft, 6⅛ in.
Rifling:	
Length	12 ft, 8⅝ in.
Number of grooves	32
Twist, right hand	one turn in 25 calibers
Type of breechblock	vertical sliding
Type of firing mechanism	spring-actuated, inertia percussion
Estimated accuracy life of tube	700 equivalent full charge rounds
Mount:	
Weight (w/fluid)	1,868 lb
Type of recoil mechanism	hydrospring
Number of recoil cylinders	2
Length of recoil:	
Normal	
Maximum	
Capacity of recoil mechanism (including reservoir)	8 gal
Elevation (max)	15°
Depression (max)	10°
Traverse, maximum, right or left	30°
Operation of firing linkage	manual or electrical

AMMUNITION

Types ....AP-T, APC-T, HE, HE-T, HEAT, WP, TP-T, and HEAT-T

PERFORMANCE

Muzzle velocity:	
APC-T, HEAT	2,800 fps
AP-T, TP-T	3,000 fps
HE, WP	2,700 fps
HE-T, WP-T	2,400 fps
HEAT-T	4,000 fps
Range:	
APC-T (2° 30 min elevation)	3,000 yd
HEAT (4° 3 min elevation)	3,000 yd
AP-T, TP-T (2° 16 min elevation)	3,000 yd
HVAP-T, HVTP-T (2° 9 min elevation)	3,000 yd
HEP-T (6° 13 min elevation)	3,000 yd
HE, WP (2° 41 min elevation)	3,000 yd
HE-T (42° 30 min elevation)	13,963 yd
WP-T (42° 53 min elevation)	14,263 yd
HEAT-T (6° 14 min elevation)	3,000 yd
Rate of fire	

EQUIPMENT

Sighting and fire control:*

Installed on vehicle prior to issue:

MOUNT, TELESCOPE: M111 (T219)

Boxed and stowed on vehicle prior to issue:

FIRING TABLE: FT 90-N-1 and FT 90-N-1, C1

FUZE SETTER: M27 (T40)

QUADRANT, FIRE CONTROL: gunner's M1A1, w/case

TELESCOPE: M104 (T186).

Basic Issue Items: See TM 9-2350-213-10 (app. III).

INSTRUCTIONAL MATERIAL

CARTRIDGE, 90-MILLIMETER: HVTP-T, M317A1, M317A2, M333, M333A1

CARTRIDGE, 90-MILLIMETER, BLANK: M394

CARTRIDGE, 90-MILLIMETER, DUMMY: M12, M12B1, and M12B2

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

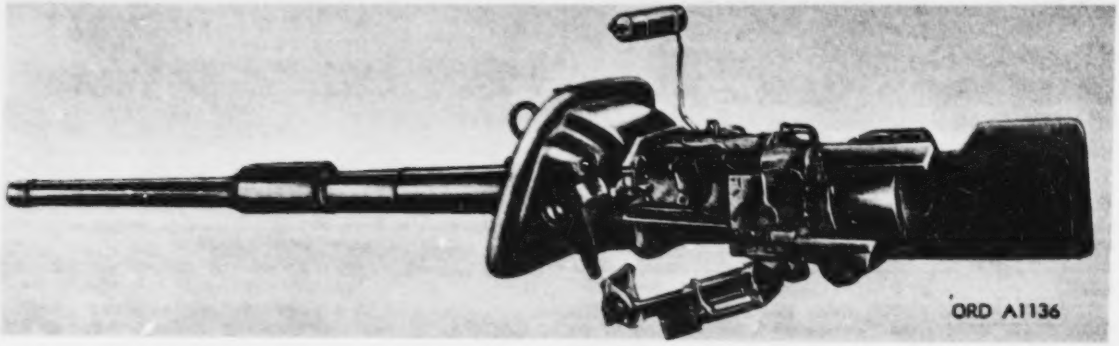
Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-2350-213-10, TM 9-1015-222-35, TM 9-1015-222-35P.

* For characteristics and data, see item in sections 14 and 18.

CANNON, 105-MILLIMETER GUN: M68 (T254E2); MOUNT GUN: 105-MM COMBINATION, M116


ORD A1136

Model *Cannon*	*Mount*	*Secondary item* *Line item No.*	*Federal stock No.*
M68			1015-678-9831
	M116		1015-859-4510

General

The CANNON, 105 MILLIMETER GUN: M68 (T254E2), with MOUNT, GUN: 105-mm combination, M116, provides the major armament of TANK, COMBAT, FULL TRACKED: 105-mm gun, M60.

The cannon consists of a tube and breech mechanism. It is of the semiautomatic, drop-block, counter-recoil-actuated-type which is fired electrically only. The tube is attached to the breech ring of the breech mechanism by interrupted buttress threads and locked with a tapered pin for providing a quick-change principle which allows removal and installation through the shield of the mount which is installed in the tank.

The mount consists primarily of a shield and cradle. The mount is supported on trunnion bearings installed on pins set in the turret. Attachments are provided for mounting the 7.62-mm coaxial machinegun, the articulated telescope, auxiliary firing control box, gunner's guard, and ejector bracket. The cradle forms the outer cylinder of the hydrospring type concentric recoil mechanism.

Differences among models

Data plate location

The model and serial numbers of the gun cannon are stamped on bottom, rear end of the breech.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Cannon:	
Weight (complete)	2,465 lb
Weight of tube	1,660 lb
Length (muzzle to rear face of breech)	18 ft, 2½ in.
Length of tube	17 ft, 6½ in.
Rifling:	
Length	17 ft, 6½ in.
Number of grooves	28
Twist, right-hand	one turn in 18 calibers
Type of breechblock	sliding wedge, drop block, counter-recoil opening, spring closing
Type of firing mechanism	electric firing, automatic mechanically retracted firing pin
Estimated accuracy life of tube	200 to 300 rd
Mount:	
Weight	5,752 lb
Type of recoil mechanism	concentric hydrospring constant recoil distance
Number of recoil cylinders	1
Length of recoil:	
Nominal	1 ft
Maximum	1 ft, 1½ in.
Capacity of recoil mechanism	5.5 gal
Elevation (max)	19°
Depression (max)	(minus 178 mil (gun forward) to minus 90 mil (approx) with gun directly over rear deck).
Operation of firing linkage	none (electrical circuit only.

AMMUNITION

Types	APDS-T; HEP-T; and HEAT-T

PERFORMANCE

Muzzle velocity	(classified)
Range	(classified)
Rate of fire	(classified)

EQUIPMENT

Sighting and fire control:*
- Installed on vehicle prior to issue:
- COMPUTER, BALLISTIC: M13A1D
- DRIVE, BALLISTICS: M10 (T24E3)
- INDICATOR, AZIMUTH: M28A1
- MOUNT, TANK PERISCOPE: M104A1
- MOUNT, TELESCOPE: M114 (T199)
- PERISCOPE: M31 (T50)
- POWER UNIT: assembly (attached to periscope mount, M115)
- QUADRANT, FIRE CONTROL: elevation, M13A1
- RANGE FINDER, FIRE CONTROL: M17C, w/case
- SIGHT, INFINITY: M44C (T159E1)
- SIGHT, PERISCOPE: M28C
- TELESCOPE: articulated, M105C
- Boxed and stowed on vehicle prior to issue (no data available)
- CARD: range, tank (luminous)
- FUZE SETTER: M27 (T40)
- PERISCOPE: M27 (T36)
- PERISCOPE: M24 (T41)
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case
- SIGHT, PERISCOPE: M28C

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

Subcaliber equipment:
- CARTRIDGE, 7.62-MILLIMETER: NATO ball, M59
- MACHINE GUN: 7.62-mm, tank, M73 (T197E2)

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*For characteristics and data, see item in sections 12, 14, 15, 18, and 27.

STORAGE AND SHIPMENT DATA

Within Continental United States

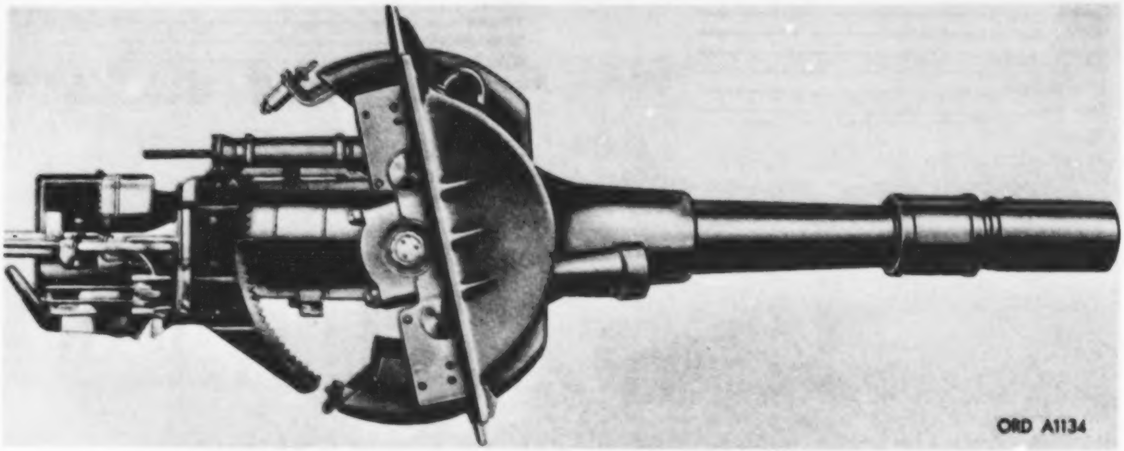
Shipped
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons --------------------------------------

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons --------------------------------------

References: TM 9-1000-213-35, TM 9-1000-213-35P, TM 9-2350-215-10, TM 9-2350-215-20, TM 9-2350-215-20P.

CANNON, 105-MILLIMETER HOWITZER: M49 (T96E1); MOUNT, HOWITZER: 105-MM, M85 (T67E1)


ORD A1134

Model Cannon	Mount	Secondary item Line item No.	Federal stock No.
M49			1015-730-5270
	M85		1015-733-2712

General

CANNON, 105-MILLIMETER HOWITZER: M49 (T96E1) with MOUNT, HOWITZER: 105-mm, M85 (T67E1), provides the major components for the 105-millimeter, full tracked, self propelled howitzer M52 (T98E1) and M52A1.

The cannon consists of a tube screwed into a breech ring at the breech end, with an evacuator chamber and locknut mounted on the muzzle end. A vertical cylinder, an integral part of the left side of breech ring, houses the breechblock closing spring mechanism. The breechblock rides in the machined interior of the breech ring.

The mount consists primarily of a front shield and cradle. The front shield is an armor steel casting which supports the elevation trunnions of the cradle in self-alining bearings. The cradle is a large cylindrical casting with a hollow bore. The bore of cradle contains front and rear follows which provide bearing support surfaces in which the cannon tube slides during recoil and counterrecoil. In addition, the cradle forms the outer cylinder of the recoil mechanism and mounts all the tipping parts including the replenisher assembly, breech operating and firing mechanism assembly, rotor shield, and elevating rack.

Differences among models

Data plate location

The model and serial numbers of the cannon are stamped on the front wall of the breech ring.

The mount and recoil mechanism identification plates are mounted on the breech operating and firing mechanism bracket.

Classification: Standard B (OTCM 36541).

CHARACTERISTICS

Cannon:	
Weight	942 lb
Weight of tube	595 lb
Length	13 ft. ⅝ in.
Length of tube (muzzle to breech face of tube)	7 ft. 9 in.
Rifling:	
Length	6 ft. 4⅞ in.
Number of grooves	36
Twist, right hand	one turn in 20 calibers
Type of breechblock	vertical sliding
Type of firing mechanism	spring actuated, inertia percussion
Estimated accuracy life of tube	
Mount:	
Weight	
Type of recoil mechanism	concentric hydrospring constant recoil distance
Length of recoil:	
Maximum	1 ft, 1 in.
Normal	11¾ in.
Number of recoil cylinders	
Capacity of recoil mechanism (including replenisher assembly)	—3.5 gal
Elevation (max)	+65°
Depression (max)	—10°
Traverse (right or left)	60°
Operation of firing linkage	manual

AMMUNITION

Types ....HE, HEP, HEP-T, HEAT, HEAT-T, CHEM, and ILLUM

PERFORMANCE

Muzzle velocity:	
HEAT (charge not adjustable)	1,250 fps
HE (maximum zone charge)	1,550 fps
Range:	
HEAT (625 mils elevation)	8,700 yd
HE (778.6 mils elevation)	12,205 yd
Rate of fire	

EQUIPMENT

Sighting and fire control:*

- FUZE SETTER: M27 or M22 and M23 and M28 or M14
- MOUNT, TELESCOPE: M99A1 or M99
- MOUNT, TELESCOPE: M100
- PERISCOPE: M13, M15A1, M17, M23 (T38)
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: gunner's, M1A1 or M1, w/case
- TABLE: firing (FT-105-M-4)
- TELESCOPE: M101 (T150E1)
- TELESCOPE, PANORAMIC: M100 (T149E1)

* For characteristics and data, see item in sections 14, 18, 27, and 28.

TRIPOD, SURVEYING: FSN 6675-240-1881 (issued by Corps Engineers)

Basic Issue Items: See TM 9-7204.

INSTRUCTIONAL MATERIAL

CARTRIDGE, 105-MILLIMETER BLANK: M395
CARTRIDGE, 105-MILLIMETER DUMMY: M14
CARTRIDGE, 105-MILLIMETER: semifixed, empty, M1
CARTRIDGE, 105-MILLIMETER: semifixed, TP-T, M67

STORAGE AND SHIPMENT DATA

Within Continental United States

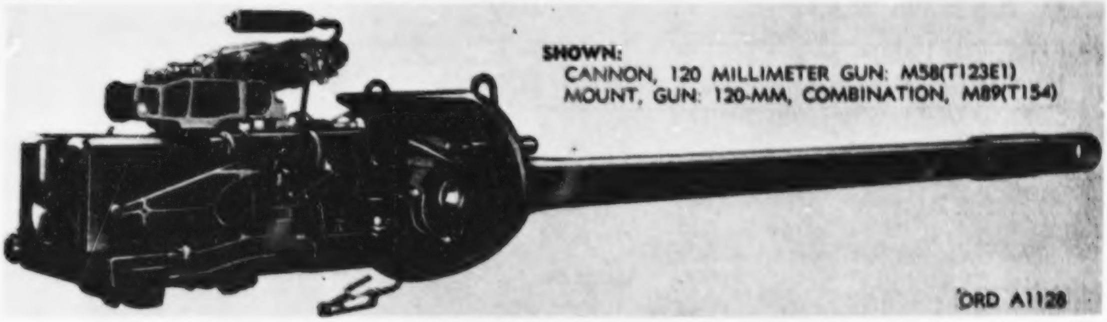
Shipped
  Length --
  Width --
  Height --
  Volume --
  Gross weight --
  Ship tons --

Outside Continental United States

Shipped
  Length --
  Width --
  Height --
  Volume --
  Gross weight --
  Ship tons --

References: SNL C-86, TM 9-1324AA, TM 9-1015-211-34, TM 9-7204.

MOUNT, GUN: 120-MM, COMBINATION, M89 (T154) OR M89A1
CANNON, 120-MILLIMETER, GUN: M58 (T123E1);



SHOWN:
CANNON, 120 MILLIMETER GUN: M58(T123E1)
MOUNT, GUN: 120-MM, COMBINATION, M89(T154)

ORD A1128

Model		*Secondary item*	
Cannon	*Mount*	*Line item No.*	*Federal stock No.*
M58			1015-508-0782
	M89		1015-785-5100
	M89A1		

General

CANNON, 120-MILLIMETER GUN: M58 (T123E1) with MOUNT, GUN: 120-mm, combination, M89, provides the major armament of TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 (T43E1) or with mount M89A1 the major armament of TANK, COMBAT, FULL TRACKED: 120-MM GUN, M103A1.

The cannon principally consists of a tube, counterweight, evacuator chamber, and breech ring group with related parts. Ammunition is of the "separated" type, consisting of a fuzed or solid projectile and a propelling charge. The breech mechanism is designed for automatic opening of the breech during counterrecoil, and automatic closing by spring action upon insertion of a cartridge case. The round is ejected automatically upon the opening of the breech.

The mount consists primarily of a shield, mount adapter, cradle, and equilibrator mechanism. In addition, it provides attachment for the breech operating and firing mechanism, coaxial machinegun mounts, and the equilibrator bracket. The mount supports the cannon and is attached to the adaptor assembly which is secured in the turret by the trunnions. The recoil mechanism assembly absorbs the recoil forces of the cannon and provides counterrecoil to bring the cannon back to battery.

Differences among models

Data plate location

The tube and breech ring serial numbers of the cannon are stampings located on the breech end of the cannon and the top of the breech ring, respectively. The mount nameplate is located on the rear of the mount of the mount housing between the recoil cylinders.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Cannon:	
Weight (complete)	6,286 lb
Weight of tube	4,600 lb
Length (muzzle to rear face of breech ring assembly with counterweight)	24 ft, 10⅝ in.
Length of tube	23 ft, 6 in.
Rifling:	
Length	20 ft, 4 in.
Twist, right hand	one turn in 25 calibers
Type of breechblock	vertical sliding
Type of firing mechanism	spring-actuated inertia percussion
Estimated accuracy life of tube	
Mount:	
Weight:	
M89	
M89A1	
Type of recoil mechanism (M89 or M89A1)	multiple cylinder hydrospring
Number of recoil cylinders (M89 or M89A1)	4
Capacity of recoil mechanism (M89 or M89A1)	20 gal
Elevation (max) (M89 or M89A1)	15°
Depression (max) (M89 or M89A1)	8°
Operation of firing linkage (M89 or M89A1)	manual or electrical

AMMUNITION

Types	AP-T, HE-T, WP-T, and TP-T

PERFORMANCE

Muzzle velocity:	
HE	2,500 fps
AP-T	3,500 fps
Range:	
HE	19,910 yd
AP-T	25,290 yd
Rate of fire	

EQUIPMENT

Sighting and fire control:*
- Installed on tank M103 prior to issue:
  - DRIVE, BALLISTICS: M6 (T23E2)
  - INDICATOR, AZIMUTH, MECHANICAL: M30 (T25)
  - MOUNT, PERISCOPE: M106 (T176E2)
  - PERISCOPE: M20A3 or M20A1
  - QUADRANT, FIRE CONTROL: elevation, M13 (T21)
  - RANGE FINDER, FIRE CONTROL: M14 (T42E1)
- Installed on tank M103A1 prior to issue:
  - COMPUTER, BALLISTICS: M14 (T33)
  - CORRECTOR, CANT: M3 (T16)
  - DRIVE MOUNT, PERISCOPE: M9 (T36)
  - INDICATOR, AZIMUTH, MECHANICAL: M28A1 (T28E1)
  - INVERTER, ASSEMBLY: (ORD No. 8603214)
  - MOUNT, TELESCOPE: M107 (T209)
  - PERISCOPE: M29 (T50E1)
  - QUADRANT, FIRE CONTROL: elevation, M13 (T21)
  - RANGE FINDER, FIRE CONTROL: M15 (T52E1)
  - SERVO MECHANISM, ELEVATION: M1 (T1)
  - SIGHT, INFINITY: M44 (T159)

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* *For characteristics and data, see item in sections 12, 14, 15, 16, 18, and 27.*

TELESCOPE: M102 (T172)
TRANSMITTER, SUPERELEVATION: M28 (T14)
Boxed and stowed in vehicle prior to issue:
FIRING TABLE: FT 120-C-1
FUZE SETTER: M27 or M14
PERISCOPE: M17
PERISCOPE: M24
PERISCOPE: M27
QUADRANT, FIRE CONTROL: gunner's, M1A1 or M1, w/case

Basic Issue Items: See TM 9-2350-206-12, C1 and TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL
STORAGE AND SHIPMENT DATA
Within Continental United States

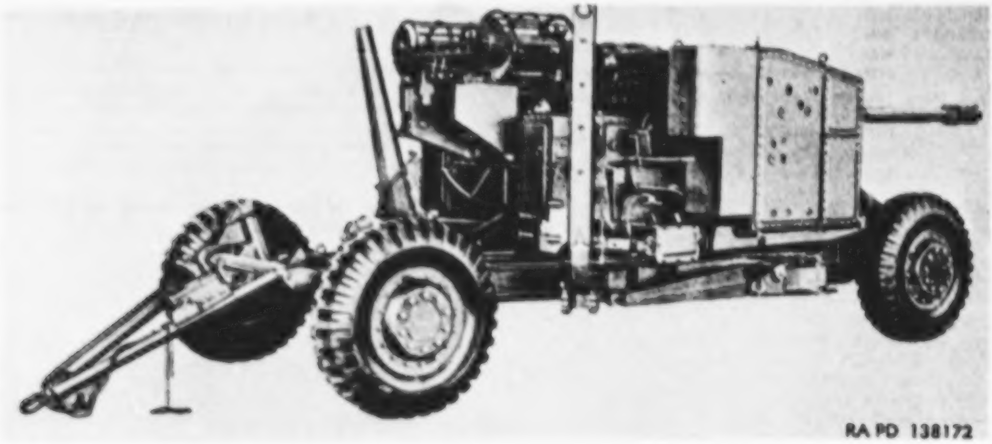
Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: TM 9-2350-206-12, TM 9-8003, TM 9-1015-215-35P, TM 9-2350-206-20P.

GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-MM WEAPONS SYSTEM, M51, W/E (CANNON: 75-MM, AUTOMATIC GUN, M35 (T83E6 OR T83E7); RECOIL MECHANISM: T17E2 or M29 (T47E3); MOUNT, GUN: 75-MM, AA, M84 (T69))



RA PD 138172

Model Cannon	Model Mount	Recoil Mechanism	Major item Line item No.	Federal stock No.
M35 (T83E6) or M35 (T83E6) or M35 (T83E7)	M84 (T69)	T47E2 or M29(T47E3) or T47E2		1015-885-7482

General

GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51, w/e, consisting of CANNON: 75-mm, automatic gun, M35 (T83E6 or T83E7), RECOIL MECHANISM: T47E2 or M29 (T47E3), and MOUNT, GUN: 75-mm AA, M84 (T69) comprises a mobile, medium range, auto-loading weapon which is used primarily against aircraft, but may also be used against ground targets.

The cannon consists of a steel tube screwed into a breech ring that is locked to the tube with a key. Support and alinement for this assembly in the body cradle of the recoil mechanism are provided by rails fastened to the breech ring and the tube support on each side of the cannon. The cannon features an automatic breech mechanism that utilizes the force of counterrecoil to cam the vertically sliding breechblock to the open position and wind the breech closing torsion spring. This spring is released and raises the breechblock to closed position when the round is rammed home, thereby, chambering the round and alining the percussion mechanism for firing the gun.

The mount is a mobile, four-wheel assembly which incorporates a rigid pedestal assembly, stabilized by four retractable outrigger assemblies; a rotating top carriage assembly that permits a full 6,400 mils of traverse; and equilibrator assembly of the torsion spring type, located between the top carriage transoms, that balances the cannon. An hydraulic lifting mechanism assembly permits lowering or raising of the mount in conjunction with removal or attachment of the front and rear bogie assemblies.

The recoil mechanism is a variable hydropneumatic type shock absorber that decreases the energy of the recoil gradually and so avoids violent movement of the cannon or carriage. It is installed in the cradle of the mount.

Difference among models

The cannon T83E7 differs from the cannon T83E6 in that the tube of the cannon is chrome-plated internally. The only difference between recoil mechanism T47E2 and T47E3 is that the lower section of the front yoke on the cradle of the T47E3 is removable.

Data plate location

The cannon model and serial numbers are stamped on the rear face of the beech ring. The identification plate of the mount is attached to the right front side of the top carriage.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Cannon:

Weight (complete)	1,590 lb
Weight of tube	1,030 lb
Length (muzzle to rear face of breech)	15 ft, 3⅛ in.
Length of tube	14 ft, 9 in.
Rifling:	
Length	12 ft, 11¼ in.
Number of grooves	28
Uniform twist, right-hand	one turn in 25 calibers
Type of breechblock	vertical sliding
Type of firing mechanism	percussion
Estimated accuracy life of tube	1,800 rd

Mount:

Weight	19,285 lb
Elevation (max)	85°
Depression (max)	−6°
Operation of firing linkage	manual or electric

Recoil mechanism:

Type	hydropneumatic, variable
Number of recoil cylinders	3
Length of recoil:	
Normal (at zero mils)	2 ft, 8 in.
Normal (at 1511.3 mils)	2 ft
Maximum	3 ft, 1 in.
Capacity:	
With reserve oil	6 pt, 8 oz
Reserve oil	9 oz

AMMUNITION

Type	HE

PERFORMANCE

Muzzle velocity .... 2,800 fps

Range:

Horizontal .... 14,415 yd

Vertical .... 10,000 yd

Rate of fire .... 45 rd per min

EQUIPMENT

Sighting and fire control:*

FUZE SETTER: M27 (T40)
FUZE SETTER: M28
FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38)
MOUNT, TELESCOPE: M21A1
QUADRANT, FIRE CONTROL: gunner's, M1A1, W/CASE
QUADRANT, FIRE CONTROL: range, M4A1
TABLE, FIRING: FT 75AA-BC-1
TABLE, FIRING: FT 75BK-1
TELESCOPE, PANORAMIC: M12A7H

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

CARTRIDGE, 75-MILLIMETER, DUMMY: T146B1, w/FUZE, DUMMY, M59

CARTRIDGE, 75-MILLIMETER: empty, M334, w/FUZE, inert, M5A5

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

PRIME MOVER

TRACTOR, CARGO: M8A1

References: SNL D-48, FM 44-3, FM 44-60, TM 9-361, TM 9-3027.

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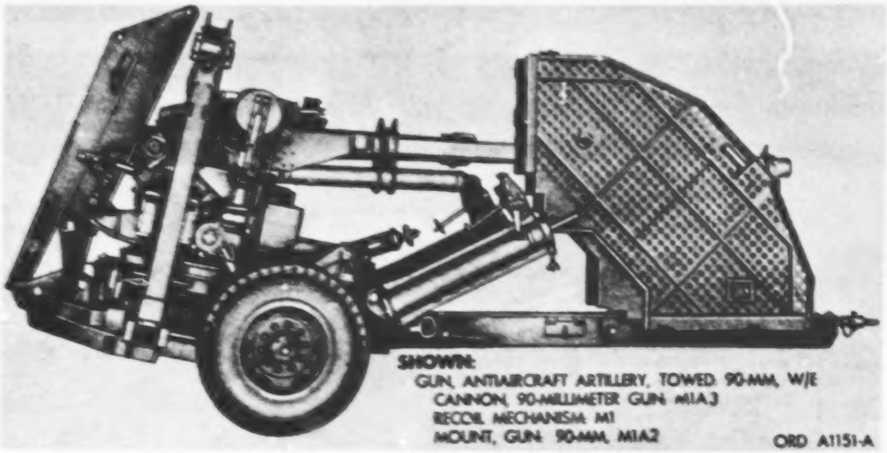
* For characteristics and data, see item in sections 13, 14, and 18.

GUN, ANTIAIRCRAFT ARTILLERY TOWED: 90-MM, M117, W/E (CANNON, 90-MILLIMETER GUN: M1A2 OR M1A3; RECOIL MECHANISM: M1-SERIES; MOUNT, GUN: 90-MM, M1A2)



SHOWN:
GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-MM, W/E
CANNON, 90-MILLIMETER GUN: M1A3
RECOIL MECHANISM: M1
MOUNT, GUN: 90-MM, M1A2
ORD A1151-A

Major item				
Model			*Line item No.*	*Federal stock No.*
Cannon	*Mount*	*Recoil Mechanism*		
M1A2 or M1A3	M1A2	M1A4 or M1A5 or M1A6	------------	1015-322-9826

General

GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-mm, M117, w/e, consists of a CANNON, 90-MILLIMETER GUN: M1A2 or M1A3; RECOIL MECHANISM: M1-series; MOUNT, GUN: 90-mm, M1A2. The weapon is used against aircraft at medium altitudes. It may also be used against ground and waterborne targets.

The cannon M1A2 or M1A3 is a single-fire, recoil operated, semi-automatic weapon, using fixed, percussion primed ammunition. When mounted on the 90-mm antiaircraft gun mount, the gun cannon is intended primarily for antiaircraft fire but may be used also against ground and waterborne targets.

The mount M1A2 is of the trailer type with a two-wheel bogie for supporting the weight while traveling. In the firing position, the mount is lowered to the ground and the bogie is detached and rolled forward. The recoil mechanism is of the hydropneumatic type with a variable recoil feature to effect different lengths of recoil at various degrees of elevation. The mount is equipped with manual and power-operating elevating and traversing mechanisms. Elevation of the tipping parts is facilitated by spring-type equilibrators. The mount is equipped with electric brakes operated from the prime mover and also hand brakes.

The recoil mechanism is a variable hydropneumatic type shock absorber that decreases the energy of the recoil gradually and so avoids violent movement of the cannon or mount. It is installed on the mount.

Differences among models

The composition of the steel in CANNON, 90-mm gun, M1A3 is the only difference between the M1A2 and the M1A3. The M1A3 meets new requirements for cold weather operations and fatigue resistance, and will allow retubing.

Data plate location

Classification: Standard B (OTCM 37727).

CHARACTERISTICS

Cannon and mount:
- Overall:
  - Length .... 20 ft, 10 in.
  - Width .... 8 ft, 5 in.
  - Height .... 9 ft, 4 in.

Cannon:
- Weight (complete) .... 2,505 lb
- Weight of tube .... 1,465 lb
- Length (muzzle to rear face of breech ring) .... 15 ft, 6 in.
- Length of tube .... 14 ft, 9 in.
- Rifling:
  - Length .... 12 ft, 8 in.
  - Number of grooves 32
  - Uniform twist, right hand .... one turn in 32 calibers
- Type of breechblock .... vertical, sliding
- Type of firing mechanism .... inertia
- Estimated accuracy life of tube .... 1,500 rd

Mount:
- Weight of recoil mechanism .... 1,650 lb
- Type of recoil mechanism .... hydropneumatic
- Number of recoil cylinders 3
- Length of recoil (variable):
  - Normal .... 1 ft, 11½ in.
  - Maximum .... 3 ft, 10 in.
- Capacity of recoil mechanism .... $2\frac{1}{16}$ gal
- Elevation (max) .... 80°
- Depression (max) .... 5°
- Operation of firing linkage .... manual or electric

AMMUNITION

Types .... Fixed: HE, WP, APC-T, HVAP-T, and SMOKE

PERFORMANCE

Muzzle velocity:
- HE and WP .... 2,700 fps
- APC-T .... 2,800 fps
- HVAP-T (M332A1) .... 3,375 fps

Range:

HE (ltd. by 30-sec MT fuse)	12,900 yd
HE (w/PD fuse), SMOKE	19,560 yd
APC-T	21,400 yd
HVAP-T (M332A1)	15,700 yd

Rate of fire	22 rd per min

EQUIPMENT

Sighting and fire control:*

- BINOCULAR: M17A1, w/e
- FIRING TABLE: 90AA-B-3
- FIRING TABLE: 90-C-3
- FUZE SETTER: M13A1
- FUZE SETTER: M26
- FUZE SETTER: M28
- MOUNT, TELESCOPE: M28
- MOUNT, TELESCOPE: M54
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case
- REMOTE CONTROL SYSTEM: M2A1
- TELESCOPE, ELBOW: M24A1
- TELESCOPE, ELBOW: M26A1

Basic Issue Items: See ORD 7 SNL D-28.

PRIME MOVER

7½ ton, 6 x 6, truck or 18-ton high speed tractor M4

STORAGE AND SHIPMENT DATA

Within Continental United States

GUN M1A2 OR M1A3 w/mount M1A2, KD, w/equipment

Shipped 1 gun M1A2 or M1A3 w/mount M1A2, KD, w/equipment per crate (fully sheathed, skid-type)

Length	20 ft, 10⅜ in.
Width	8 ft, 7⅛ in.
Height	7 ft, ⅝ in.
Volume	1,270.3 cu ft
Gross weight	23,429 lb
Ship tons	31.78

Outside Continental United States

GUN M1A2 OR M1A3 w/mount M1A2, KD, w/equipment

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

TIME TO EMPLACE

Gun alone	7 min
Gun w/FC equipment	30 min

INSTRUCTIONAL MATERIAL

BASE, DUMMY CARTRIDGE: M12 (spare)

CARTRIDGE, 90-MILLIMETER DUMMY: M12B2 w/fuse, MT, M43E2, inert.

CARTRIDGE, 90-MILLIMETER DUMMY, M12 w/fuse, dummy, M44A2.

CANNON, 37-MILLIMETER GUN, SUBCALIBER: M14, w/e

References: SNL D-28, TM 9-1370.

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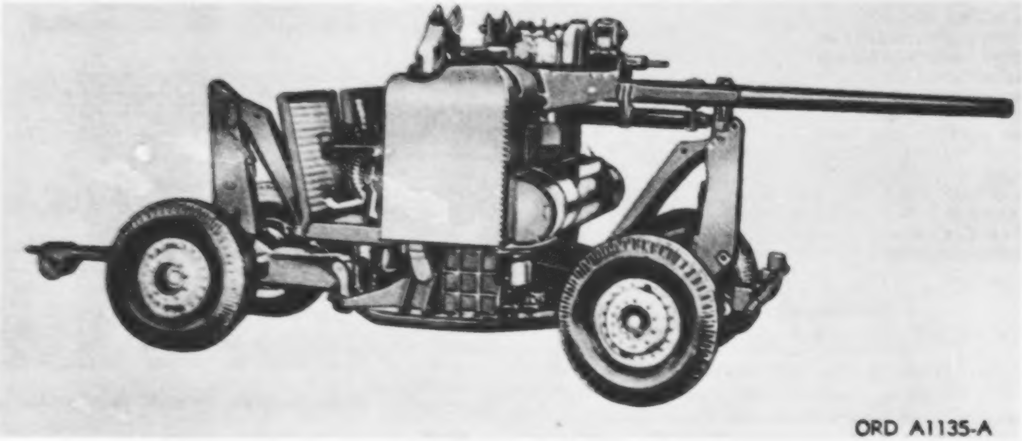
* For characteristics and data, see item in sections 14, 18, and 27.

GUN, ANTIAIRCRAFT ARTILLERY TOWED: 90-MM, M118, W/E (CANNON, 90-MILLIMETER GUN: M2A1 OR M2A2; RECOIL MECHANISM: M17-SERIES; FUZE, SETTER-RAMMER, M20; MOUNT, GUN: 90-MM, M2A1)



ORD A1135-A

Model				*Major item Line item No.*	*Federal stock No.*
Cannon	*Mount*	*Recoil Mechanism*	*Fuze, Setter-Rammer*		
M2A1 or M2A2	M2A1	M17A3 or M17A4 or M17A5	M20		1015-822-9948

General

GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 90-mm, M118, w/e, consisting of a CANNON, 90-MILLIMETER GUN: M2A1 or M2A2; RECOIL MECHANISM: M17-SERIES; FUZE, SETTER-RAMMER: M20; MOUNT GUN: 90-mm, M2A1, is a rapid-fire, high-velocity gun, firing armor-piercing, smoke, or high explosive fixed ammunition. The breech is opened automatically in counterrecoil after firing the first round and closed automatically when the round is rammed. The gun is loaded and fired manually. A combination FUZE SETTER-RAMMER: M20, motor drive, and electronic amplifier function as a unit automatically to set projectile fuses according to fire control system or director data and to ram rounds into the gun chamber at high speeds. Rounds can be hand-rammed when the fuse setter-rammer is not operating. Armor-piercing ammunition is rammed manually. The gun is positioned to azimuth and elevation either manually or by the remote control system according to fire control system. For surface targets, when the required gun elevation is less than 15°, the gun is directed by a periscope-type telescope sighting system.

The cannon consists of a gun tube and breech mechanism. The tube includes the support assembly and recoil side rails, and the breech mechanism includes the breech ring, breechblock, and breech closing mechanism.

The mount consists of the equilibrators; elevating, traversing, and leveling mechanisms; top carriage; pedestal; and outriggers. Normally, the bogies are removed and the pedestal is emplaced on the ground for firing; however, the gun can be fired from the bogies in an emergency. The pedestal forms the base of the mount and chassis for attaching the bogies. It supports the top carriage and leveling mechanism. The cradle of the recoil mechanism supports all of the tipping parts, the cannon assembly, recoil mechanism, counterrecoil buffer, and combination fuse setter-rammer. Spring equilibrators, mounted on the top carriage, counterbalance the overhanging weight of the cannon.

The recoil mechanism is a hydropneumatic type shock absorber that decreases the energy of the recoil gradually and so avoids violent movement of the cannon or mount. It is installed on the mount.

Differences among models

The cannon M2A2 has a different composition steel in the breech ring. This allows the cannon M2A2 to be retubed. The gun mount M2A1 is the mount M2 modified for use with the fire control system M33C or T33C. A microrecoil switch was mounted on the recoil mechanism cradle and connected to the M33C or T33C. The indicator regulators M1A1 have been changed so as to affect the operating procedure. A gun junction box has been added as part of the remote control system. A signal box has been added to the mount M2A1. The difference in recoil mechanism M17, M17A1, and M17A2 is in the floating piston assemblies. The mechanism M17A1 is the M17 modified by the addition of a spacer in the floating piston and new type packings. The M17A2 is a new mechanism having a one-piece floating piston. The M17A3, M17A4, and M17A5 are the mechanisms M17, M17A1, and M17A2 modified for use on antiaircraft mount M2A1. The modification consists of the installation of a new-type firing handle in place of the firing lever handle. The new handle contains a safety lock actuated by a solenoid, which is controlled at the antiaircraft fire control system M33C or T33C. In order to install the new-type firing handle, it was also necessary to change the design of the link connecting the breech mechanism handle. This modification converts the present firing mechanism of the recoil mechanisms M17, M17A1, and M17A2 so that it will operate in conjunction with the antiaircraft fire control system M33C or T33C.

Data plate location

. The cannon tube serial number, manufacturer, and model designations are stamped on the upper surface of the tube, just forward of the tube support body. The mount nameplate is attached to the right side top carriage side frame.

Classification: Standard B (OTCM 37727).

CHARACTERISTICS

Cannon and Mount:	
Overall:	
Length	29 ft, 6 in.
Width	8 ft, 7 in.
Height	10 ft, 1 in.
Cannon:	
Weight (complete)	2,360 lb
Weight of tube	1,465 lb
Length (muzzle to rear end of recoil slide rail)	16 ft, 9⅛ in.
Length of tube	14 ft, 9⅛ in.
Rifling:	
Length	12 ft, 8 in.
Number of grooves	32
Uniform twist, right hand	One turn in 32 calibers
Type of breechblock	vertical, sliding wedge
Type of firing mechanism	percussion inertia, manual
Estimated accuracy life of tube	1,500 rd
Mount:	
Weight (approx)	6,014 lb.
Elevation (max)	80°
Depression (AA firing)	22½°
Depression (max)	minus 10 deg
Operation of firing linkage	manual or electric
Tire size and type	14:00 x 24, nondirectional "mud or snow" or bus balloon
Tire pressure	75 lb
Type of brakes	electric-mechanical, compound
Traverse	continuous 360-degrees
Recoil Mechanism:	
Type	hydropneumatic
Number of recoil cylinders	2
Length of recoil:	
Normal (0° elev)	3 ft, 4 in. to 3 ft, 8 in.
Normal (80° elev)	2 ft, 2 in. to 2 ft, 4 in.
Capacity	2¹⁄₁₆ gal

AMMUNITION

Types (fixed)	APC-T, SMOKE, WP, HE, HVAP-T, and TP

PERFORMANCE

Muzzle velocity:	
APC-T	2,800 fps
WP	2,700 fps
HE	2,700 fps
Range:	
APC-T	21,400 yd
WP	19,560 yd
HE	19,560 yd
Rate of fire:	
Sustained speed	23 rd per min
Rapid	28 rd per min

EQUIPMENT

Sighting and fire control:*
AMPLIFIER: M1A2
DRIVE, MOTOR: M2A2
FUZE SETTER: M13A1
FUZE SETTER: M23
FUZE SETTER: M24
QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case
REMOTE CONTROL SYSTEM, M12A1
SIGHTING SYSTEM, AUXILIARY: M7

Basic Issue Items: See ORD 7 SNL D-38.

INSTRUCTIONAL MATERIAL

CARTRIDGE, 90 MILLIMETER: dummy, M12, M12B1, M12B2
GRAPHIC TRAINING AIDS: See DA Pam 310-5

STORAGE AND SHIPMENT DATA

Within Continental United States

Gun /w mount, KD, w/equipment.

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Gun and mount also shipped uncrated in traveling position.

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

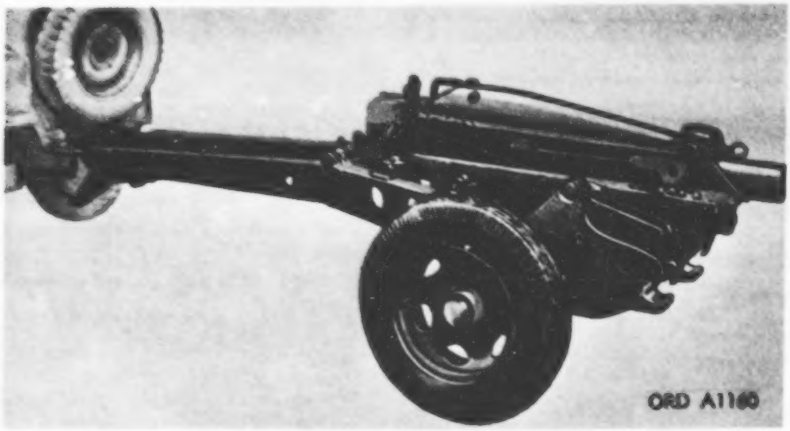
PRIME MOVER

TRACTOR, FULL TRACKED, HIGH SPEED: 18-ton, M4.**

References: SNL D-38, TM 9-3028, TM 9-3029-1, FM 44-27.

* For characteristics and data, see item in sections 14 and 18.
** For characteristics and data, see item in section 24.

HOWITZER, PACK: 75-MM, M116, W/E (CANNON, 75-MILLIMETER PACK HOWITZER: M1A1; RECOIL MECHANISM: M1-SERIES; CARRIAGE: HOWITZER (PACK). 75-MM, M8)



Major item *Model* *Cannon*	*Carriage*	*Recoil Mechanisms*	*Line item No.*	*Federal stock No.*
M1A1	M8	M1A6 or M1A7 or M1A8	4-18822-06	1015-322-9770

General

HOWITZER, PACK 75-mm, M116, w/e, consisting of CANNON, 75-MILLIMETER PACK HOWITZER: M1A1 RECOIL MECHANISM: M1A6, M1A7, or M1A8: on CARRIAGE: HOWITZER (pack), 75-mm, M8 is a general-purpose, towed, light field-artillery weapon. The howitzer is used for either direct or indirect fire and can be elevated to high angles to deliver plunging fire on a target. The weapon can be disassembled readily into nine major components for paracrate packing in parachute delivery and into eight major components for mule pack in animal transport. In traveling position for towing behind a prime mover, the weapon is almost balanced on a two-weel axle. A caster wheel can be attached to the trail to facilitate manual transport by the gun crew after parachute delivery.

The howitzer cannon consists of a tube, breech ring assembly, operating lever latch, breechblock, firing mechanism, and lock.

The howitzer carriage consists of a cradle, equilibrator and rocker assemblies, elevating mechanism, axle and traversing mechanism, front and rear trail assemblies, and wheels and tires.

The recoil mechanism is a variable hydropneumatic type shock absorber that decreases the energy of the recoil gradually and so avoids violent movement of the cannon or mount. It is installed on the mount.

Differences among models

The recoil mechanism M1A6 is a modified M1A4: the change being the redesign of the piston rod assembly and piston rod collar stop. Stronger bolts are also used to fasten the cylinder support to the bottom sleigh. The M1A7 is a modified M1A6: the M1A7 incorporates a floating piston spacer and low temperature packing fillers. This mechanism is filled with petroleum base hydraulic oil. The M1A8 is essentially the same as the M1A7, except that it is redesigned to incorporate a one-piece floating piston and low temperature packing fillers.

Data plate location

The cannon data are stamped on the right side of the cannon tube just below the lifting eye. The recoil mechanism identification plate is located on the left side of the bottom sleigh.

Classification: Standard C (OTCM 37727).

CHARACTERISTICS

Cannon:	
Weight (tube and breech mechanism)	342 lb
Weight of tube	221 lb
Length (with breech ring)	59 in.
Length of tube	3 ft, 11⅛ in.
Rifling:	
Length	3 ft, ½ in.
Number of grooves	28
Twist, right hand	one turn in 20 calibers
Type of breechblock	horizontal sliding wedge
Type of firing mechanism	continuous pull
Estimated accuracy life of tube	20,000 rd
Carriage:	
Weight	918 lb
Type of recoil mechanism	hydropneumatic
Number of recoil cylinders	2
Length of recoil:	
Normal	2 ft, 8 in. to 2 ft, 7 in.
Maximum	2 ft, 8 in.
Capacity of recoil mechanism	3 pt
Elevation (max)	45°
Depression (max)	5°
Traverse	R or L, 3°
Operation of firing linkage	manual
Tire size and type	6:00 x 16 standard
Tire pressure	20 lb

AMMUNITION

Types:	
Semifixed	HE and SMOKE
Fixed	HEAT-T

PERFORMANCE

Muzzle velocity:	
Shell HE M48 (chg 4)	1,250 fps
Shell HE M48 (chg 1)	700 fps
Range (Shell HE M48)	9,620 yd

Rate of fire:

Short bursts	6 rd per min
Prolonged firing	3 rd per min

EQUIPMENT

Sighting and fire control:*

- ADAPTER, TELESCOPE: M9
- BINOCULAR: M17A1, w/c
- MOUNT, TELESCOPE: M8A1
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case
- TABLE, FIRING: FT 75–I–4
- TELESCOPE, ELBOW: M62A1C
- TELESCOPE, OR PANORAMIC: M1

Basic Issue Items: See ORD 7 SNL C–20

INSTRUCTIONAL MATERIAL

Subcaliber equipment:

- GUN, 37-MILLIMETER: M1916 or M12
- MOUNT, 37-MILLIMETER: M5
- MOUNT, 37-MILLIMETER: M5 w/adapter

CARTRIDGE, 75-MILLIMETER DUMMY: M19
CARTRIDGE, 75-MILLIMETER DUMMY: M2A2

STORAGE AND SHIPMENT DATA

Within Continental United States

Howitzer only.
Shipped

Length	5 ft, 9 in.
Width	1 ft
Height	1 ft, 1 in.
Volume	5.7 cu ft
Gross weight	404 lb
Ship tons	0.14

Howitzer M1A1 w/carriage M8 (KD) w/equipment
Shipped 1 howitzer M1A1 w/carriage M8 (KD) w/equipment per crate (fully sheathed, skid-type)

Length	5 ft, 9 in.
Width	3 ft, 10 in.
Height	3 ft
Volume	48.8 cu ft
Gross weight	1,860 lb
Ship tons	1.22

Outside Continental United States

Howitzer only.
Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Howitzer M1A1 w/carriage M8 (KD) w/equipment
Shipped 1 howitzer M1A1 w/carriage M8 (KD) w/equipment per crate (fully sheathed, skid-type)

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

PRIME MOVER

¼-ton, 4 x 4, truck; airplane C47-unit of parachute loads; glider CG–4A-unit loads.

References: SNL C–20, TM 9–8061, TM 9–319.

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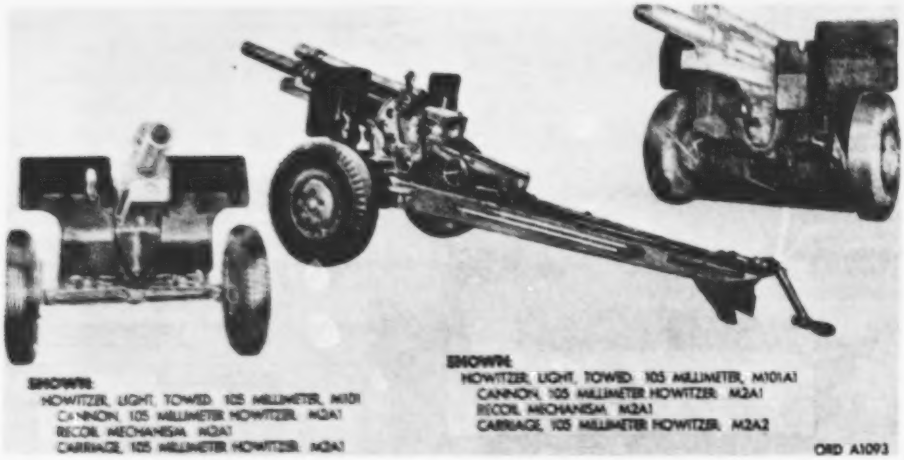
*For characteristics and data, see item in sections 14, 18, and 27.

HOWITZER, LIGHT, TOWED: 105-MM, M101 AND M101A1 (CANNON, 105-MILLIMETER HOWITZER: M2A1 OR M2A2; RECOIL MECHANISM: M2-SERIES; CARRIAGE, 105-MILLIMETER HOWITZER: M2A1 OR M2A2)



SHOWN:
HOWITZER, LIGHT, TOWED: 105 MILLIMETER, M101
CANNON, 105 MILLIMETER HOWITZER: M2A1
RECOIL MECHANISM: M2A1
CARRIAGE, 105 MILLIMETER HOWITZER: M2A1

SHOWN:
HOWITZER, LIGHT, TOWED: 105 MILLIMETER, M101A1
CANNON, 105 MILLIMETER HOWITZER: M2A1
RECOIL MECHANISM: M2A1
CARRIAGE, 105 MILLIMETER HOWITZER: M2A2

ORD A1093

Model: Cannon	Carriage	Recoil Mechanism	Major item	Line item No.	Federal stock No.
			M101		
M2A1 or M2A2	M2A1	M2A1 or M2A2 or M2A3 or M2A4 or M2A5			1015-322-9728
			M101A1		
M2A1 or M2A2	M2A2	M2A1 or M2A2 or M2A3 or M2A4 or M2A5			1015-322-9752

General

HOWITZER, LIGHT, TOWED: 105-mm, M101 or M101A1, consisting of a CANNON, 105-MILLIMETER HOWITZER: M2A1 or M2A2; RECOIL MECHANISM: M2-SERIES; CARRIAGE, 105-MILLIMETER HOWITZER: M2A1 or M2A2, is a general purpose, towed, light field artillery weapon. It can be used for direct or indirect fire.

The cannon consists of a tube assembly, breech ring, and locking ring. The cannon is mounted on the recoil sleigh assembly. The firing mechanism is a continuous pull (self-cocking) type actuated by pulling a lanyard. The cannon is single-loaded and air-cooled, and uses semifixed ammunition.

The carriage is of the single-axle and split-trail type. The trails are divided at emplacement, but drawn together and locked during travel. A drawbar is provided for securing to a prime mover. The carriage consists of an equilibrator, shield, elevating mechanism, cradle, gears, elevating arcs, traversing mechanisms, top carriage, wheels, and trails.

The recoil mechanism is a variable hydropneumatic type shock absorber that decreases the energy of the recoil gradually and so avoids violent movement of the cannon or carriage. It is installed in the cradle of the carriage.

Differences among models

The major difference between M101 and M101A1 is the M101 has the M2A1 carriage and the M101A1 has the M2A2 carriage.

The muzzle end of the howitzer cannon M2A1 is straight while the M2A2 has a bell-shaped muzzle end.

The carriage M2A2 is equipped with a main shield group composed of right and left upper and lower shields, right and left top flaps, a bottom flap, and right and left auxiliary shields; while the carriage M2A1 is equipped with a right and left main shield and top shield.

Recoil mechanism M2A1 has a two-piece floating piston, with grease keeping the two halves separated; this mechanism is not satisfactory for temperatures below −20°F. In mechanism M2A2, spacers in the floating piston keep the two halves separated the required distance while the mechanism M2A3 is equipped with a one-piece floating piston; both of these mechanisms are satisfactory for operation at either normal or extreme cold temperatures. Recoil mechanisms M2A1, M2A2, and M2A3 which have been overhauled to use Teflon-aluminum seals were given M2A4 designations. The newly manufactured mechanisms, basically identical to the M2A4, were designated M2A5.

Data plate location

The howitzer cannon data are stamped on top of the breech ring. The carriage identification plate is attached to the left elevating arc. The recoil mechanism identification plate is attached to the left front of the sleigh.

Classification

M101	Standard B (OTCM 37568)
M101A1	Standard A (OTCM 37568)

CHARACTERISTICS

Howitzer, Light, Towed: 105-mm, M101 and M101A1:

Length	(approx) 19 ft, 8 in.
Width	(approx) 7 ft, ½ in.
Height (approx):	
M101	5 ft
M101A1	5 ft, 2 in.
Weight:	
M101	4,475 lb
M101A1	4,980 lb

Cannon:	
Weight	1,064 lb
Weight of tube	706 lb
Length (muzzle to rear face of breech ring)	8 ft, 5⅝ in.
Length of tube	7 ft, 9$\frac{1}{16}$ in.
Rifling:	
Length	6 ft, 6 in.
Number of grooves	36
Twist, right hand	one turn in 20 calibers
Type of breechblock	horizontal sliding wedge
Type of firing mechanism	continuous pull
Estimated accuracy life of tube	20,000 rd
Carriage:	
Weight (approx):	
M2A1	2,495 lb
M2A2	3,000 lb
Recoil mechanism:	
Type of recoil mechanism	hydropneumatic
Number of recoil cylinders	2
Length of recoil:	
Normal	3 ft, 3 in. to 3 ft, 4 in.
Maximum	3 ft, 8 in.
Capacity of recoil mechanism	5 to 5½ pts
Elevation (max)	66°
Depression (max)	−5°
Operation of firing linkage	manual
Traverse, right or left	23°

AMMUNITION

Types	**CHEM, HE, HEAT-T, HEP, HEP-T, ILLUM, BE** (leaflet), **SMOKE, TP-T, BLANK,** and **DUMMY**

PERFORMANCE

Muzzle velocity:	
Shell, HE (maximum charge)	1,550 fps
Shell, HEAT (charge not adjustable)	1,250 fps
Range:	
Shell, HE (783.4 mils elevation and zone VII charge)	12,330 yd
Shell, HEAT (158.1 mils elevation—charge not adjustable)	8,500 yd
Rate of fire:	
First ½ minute	8 rd per min
First 4 minutes	4 rd per min
First 10 minutes	3 rd per min
Prolonged fire	100 rd per hour

EQUIPMENT

Sighting and fire control:*

AIMING CIRCLE: M2, w/e**
POST AIMING: M1A2
BINOCULAR: M13A1, w/e**
BINOCULAR: M17A1, w/e**
COMPASS, M2, w/e**
FUZE SETTER: M26
FUZE SETTER: M28
MOUNT, TELESCOPE: M21A1
MOUNT, TELESCOPE: M23
QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case
QUADRANT, FIRE CONTROL: range, M4A1
TELESCOPE, ELBOW: M16A1D
TELESCOPE, PANORAMIC: M12A7H
WATCH, WRIST: grade III**

Basic Issue Items: See TM 9-325, C3.

INSTRUCTIONAL MATERIAL

Subcaliber equipment:

GUN, 37 MILLIMETER, SUBCALIBER: M13
TABLE, FIRING: FT 37-BA-2
TABLE, FIRING: FT 105-H-4
TABLE, FIRING: FT 105-H-4 (abridged)
TABLE, FIRING: FT 105-AM-1 (abridged)
TABLE, FIRING: FT 105-AN-1 (abridged)

STORAGE AND SHIPMENT DATA

Within Continental United States

Howitzer only.

Shipped 1 per box (double-end style).

Length	8 ft, 11⅝ in.
Width	1 ft, 5⅝ in.
Height	1 ft, 3⅝ in.
Volume	22.4 cu ft
Gross weight	1,200 lb
Ship tons	0.56

Howitzer M2A1 w/carriage M2A1 or M2A2 (KD) w/equipment.

Shipped 1 per crate (fully sheathed skid-type crate).

Length	11 ft, 11 in.
Width	6 ft, 1⅛ in.
Height	4 ft, 1½ in.
Volume	301.8 cu ft
Gross weight	6,425 lb
Ship tons	7.55

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

PRIME MOVER

2½-ton, 6 x 6, cargo truck or 13-ton high speed tractor, M5.

TIME TO EMPLACE

3 min.

References: SNL C-21, FM 6-75, TM 9-325, TM 9-3007, TM 9-1015-203-20P.

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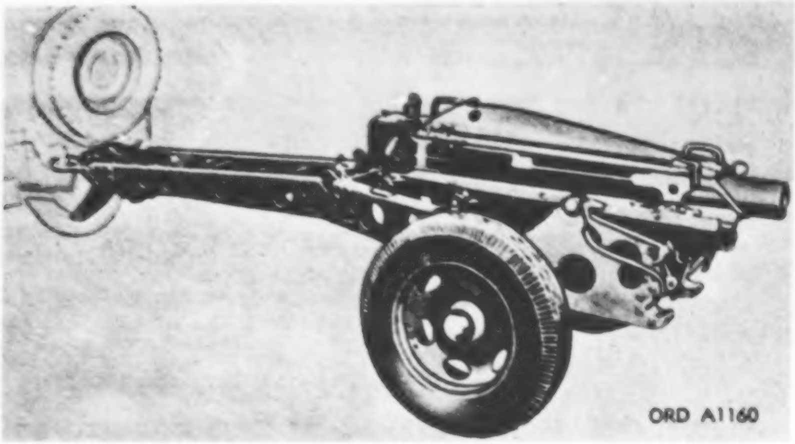
* For characteristics and data, see item in sections 14, 18, 26, and 27.

** Issued as required upon special requisition by theater commander.

HOWITZER, SALUTING: 75-MM, M120, W/E (CANNON, 75-MILLIMETER PACK HOWITZER: SALUTING, M1A1C; RECOIL MECHANISM, 75-MILLIMETER PACK HOWITZER: SALUTING, M1A4C OR M1A6C; CARRIAGE, 75-MILLIMETER PACK HOWITZER: M8)


ORD A1160

Major item

Model			*Line item No.*	*Federal stock No.*
Cannon	*Carriage*	*Recoil mechanism*		
M1A1C	M8	M1A4C or M1A6C	4-27217-01	1015-699-0764

General

HOWITZER, SALUTING: 75-mm, M120, w/e (CANNON, 75-MILLIMETER PACK HOWITZER: SALUTING, M1A1C; RECOIL MECHANISM, 75-MILLIMETER PACK HOWITZER: SALUTING, M1A4C or M1A6C; CARRIAGE, 75-MILLIMETER PACK HOWITZER: M8) is the HOWITZER, PACK: 75-mm, w/e (CANNON, 75-MILLIMETER PACK HOWITZER: M1A1; RECOIL MECHANISMS: M1-SERIES; CARRIAGE, 75-MILLIMETER PACK HOWITZER: M8) modified for saluting purposes by welding a safety device in the howitzer tube (CANNON, 75-MILLIMETER PACK HOWITZER: M1A1) to prevent entrance of a projectile and by inactivating the recoil mechanism. Four weld beads and a safety device of scrap steel are placed in the breech-end of the howitzer tube to prevent the insertion of a projectile. The oil reserve in the recoil mechanism is drained and the setscrew (for recuperator cylinder oil filling valve) is tack welded in place to prevent any future filling of the mechanism with oil. The nitrogen pressure in the recuperator cylinder is released and a ⅛-inch hole is drilled in the bottom of the recuperator cylinder approximately 4 inches from the air-end of the recuperator cylinder. The recuperator cylinder cover (ORD No. 6015001) is installed and tack welded in place; this will insure that nitrogen will not be added to the mechanism. A bead is welded along the left and right sides of the recoil slides in order to prevent the weapon from sliding out of battery in case the weapon is elevated.

The howitzer cannon M1A1C consists of a tube, breech ring assembly, operating lever latch, breechblock, firing mechanism, and lock.

The carriage M8 consists of the cradle, equilibrator and rocker assemblies, elevating mechanism, axle and traversing mechanism, front and rear trail assemblies, and wheels and tires.

The recoil mechanism is a variable hydropneumatic-type shock absorber which, in this case, has been inactivated.

Differences among models

Data plate location

A stencil is used to stamp M1A1C on the tube before assembly after the modification to howitzer cannon M1A1 is performed. The recoil mechanism identification plate is located on the left side of the bottom sleigh. The cannon data is stamped on the right side of the tube just below the lifting eye.

Classification: Standard C (OTCM 37759).

CHARACTERISTICS

Cannon:	
Weight (tube and breech mechanism)	342 lb
Weight of tube	222 lb
Length (with breech ring)	4 ft, 11 in.
Length of tube	3 ft, 11½ in.
Rifling:	
Length	
Number of grooves	28
Twist, right hand	one turn in 20 calibers
Type of breechblock	horizontal sliding wedge
Type of firing mechanism	continuous pull
Estimated accuracy life of tube	20,000 rds
Elevation (max)	45° (800 mils)
Depression (max)	5° (225 mils)
Traverse, R or L	3° (135 mils)
Operation of firing linkage	manual
Carriage:	
Weight	
Tire size and type	6:00 x 16 standard
Tire pressure	20 lb
Recoil mechanism:	
Type	inactivated hydropneumatic
Number of recoil cylinders	2

AMMUNITION

Type	BLANK

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Howitzer only:

Shipped

Length	5 ft, 9 in.
Width	1 ft
Height	1 ft, 1 in.
Volume	5.7 cu ft
Gross weight	494 lb
Ship tons	0.14

Howitzer M1A1 w/carriage M8 (KD) w/equipment:

Shipped 1 howitzer M1A1 w/carriage M8 (KD) w/equipment per crate (fully sheathed, skid-type).

Length	5 ft, 9 in.
Width	2 ft, 10 in.
Height	3 ft
Volume	48.8 cu ft
Gross weight	1,850 lb
Ship tons	1.22

Outside Continental United States

Howitzer only:

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Howitzer M1A1 w/carriage M8 (KD) w/equipment per crate (fully sheathed, skid-type):

Shipped 1 howitzer M1A1 w/carriage M8 (KD) w/equipment per crate (fully sheathed, skid-type).

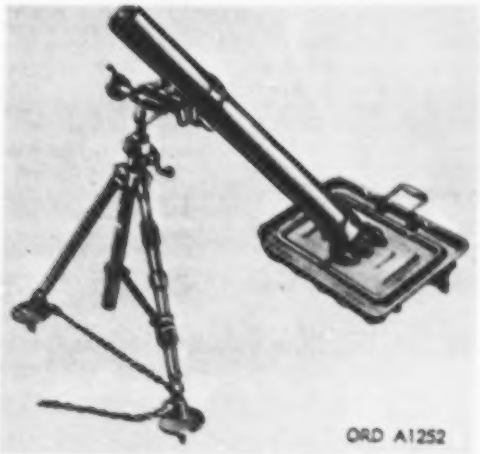
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

PRIME MOVER

¼-ton, 4 x 4, truck.

References: SNL C-26, TM 9-8061, TM 9-319, MWO C26-W38.

MORTAR, 81-MILLIMETER: M1, W/E (CANNON, 81-MILLIMETER MORTAR: M1, MOUNT, MORTAR: 81-MM, M4)


ORD A1252

Model		*Major item*	
Cannon	*Mount*	*Line item No.*	*Federal stock No.*
M1	M4, w/animal pack transport equipment.	4-28680-80	1015-678-2027
M1	M4, w/hand carrying equipment.	4-28680-40	1015-678-2026
M1	M4, w/cavalry equipment.	4-28680-50	1015-678-2025

General

MORTAR, 81-MILLIMETER: M1, w/e, consisting of CANNON, 81-MILLIMETER MORTAR: M1; MOUNT, MORTAR: 81-mm, M4, is a smooth bore, muzzle-loading, high angle-of-fire weapon. It is used as a ground weapon or mounted on combat vehicles.

CANNON, 81-MILLIMETER MORTAR: M1, consists of a tube, base cap, and a firing pin. The base cap is hollowed and threaded to screw on the barrel. It ends in a spherical projection, flattened on two sides, which fits into and locks in the socket of the baseplate. The firing pin is screwed tightly into the base cap against a shoulder. The firing pin protrudes approximately 1/20 inch through the base cap into the barrel.

Mount, mortar: 81-mm, M4, consists of a bipod and a baseplate. The bipod consists of the leg assembly, the elevating mechanism assembly, and the traversing mechanism assembly. The baseplate is a pressed steel body to which are welded a series of ribs and braces, a front flange, three loops, a link, two handles, and the socket.

Differences among models

Data plate location

The nameplate of mount M4 is attached to the yoke body. Baseplate data are on the nameplate attached to the top surface of the outer ring assembly.

Classification: Standard (OTCM 37196)

CHARACTERISTICS

Cannon:

Weight	44.5 lb
Length of bore	3 ft, 9½ in.
Length overall	4 ft, 1 13/16 in.
Type of firing mechanism	fixed firing pin

Mount:

Weight:	
Mount w/o baseplate	42.5 lb
Baseplate	45 lb
Elevation (approx)	40 to 85°
Traverse, right or left (approx)	5°

AMMUNITION

Types ....HE; ILLUM; SMOKE, FS; SMOKE, WP; and TP

PERFORMANCE

Muzzle velocity:	
CARTRIDGE, 81-MILLIMETER: (full charge)	
HE (M43A1) and TP (M43A1)	693 fps
HE (M56 and M56A1)	573 fps
HE (M362)	770 fps
ILLUM (M301A1 and M301A2)	573 fps
SMOKE, FS (M57 and M57A1)	573 fps
SMOKE, WP (M57 and M57A1)	573 fps
PROJECTILE, 81-MILLIMETER: training, M68 (ignition cartridge only)	172.8 fps
Maximum range (45-deg elevation):	
CARTRIDGE, 81-MILLIMETER: (full charge)	
HE (M43A1) and TP (M43A1)	3,300 yd
HE (M56 and M56A1)	2,536 yd
HE (M362) (5 increment max)	2,700 yd
ILLUM (M301A1 and M301A2) (51¼ deg elevation)	2,300 yd
SMOKE, FS (M57 and M57A1)	2,425 yd
SMOKE, WP (M57 and M57A1)	2,482 yd
PROJECTILE, 81-MILLIMETER: training, M68 (ignition cartridge only)	310 yd
Rate of fire:	
Normal	18 rd per min
Maximum	30 rd per min

EQUIPMENT

Sighting and fire control:*

- POST, AIMING: M4 (pack transport)
- POST, AIMING: M6 or M8 (when not pack transported)
- POST, AIMING: M10
- BINOCULAR: M17A1
- FUZE SETTER: M14
- FUZE SETTER: M25
- SIGHT UNIT: M34A2

*For characteristics and data, see item in sections 14, 18, and 27.

SIGHT, BORE, OPTICAL: M45, w/c
TABLE, FIRING: 81-AD-1 (abr)
TABLE, FIRING: 81-AE-1 (abr)
TABLE, FIRING: 81-AF-1 (abr)
TABLE, FIRING: 81-AG-1 (abr)
TABLE, FIRING: 81-AH-1 (abr)
TABLE, FIRING: 81-B-3
TABLE, FIRING: 81-B-5 (abr)
TABLE, FIRING: 81-C-4 (abr)
TABLE, FIRING: 81-F-2 (abr)
TABLE, FIRING: 81-N-1 (abr)
TABLE, FIRING: 81-S-2 (abr)
TABLE, FIRING: 81-T-2 (abr)
TABLE, FIRING: 81-V-2 (abr)
TABLE, FIRING: 81-Z-2 (abr)

Basic Issue Items: See ORD 7 SNL A-33.

INSTRUCTIONAL MATERIAL

FIN ASSEMBLY, 81-MILLIMETER CARTRIDGE: M6, for mortar cartridge, training, M68

GRAPHIC TRAINING AID: See DA Pam 310-5

PROJECTILE, 81-MILLIMETER: training, M68

TRAINER, MORTAR: subcaliber, pneumatic, M32 or M32A1

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mortar and 1 mount per wood box

Length	4 ft. 7 in.
Width	1 ft. 4 in.
Height	1 ft. 3 in.
Volume	8.4 cu ft
Gross weight	230 lb
Ship tons	0.21

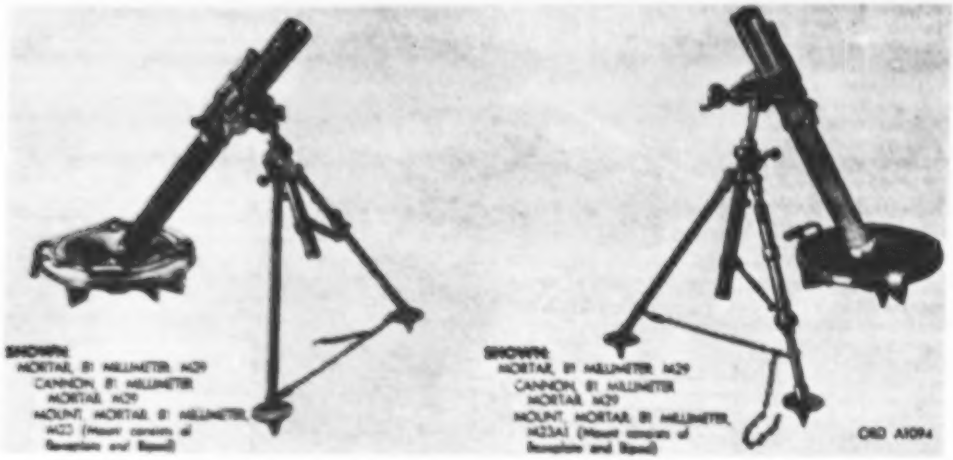
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-90, SNL A-33, TM 9-1260, TM 9-2071-1.

MORTAR, 81-MILLIMETER: M29 AND M29E1, W/E (CANNON: 81-MM, M29 OR M29E1; MOUNT, MORTAR: 81-MM, M23 OR M23A1)



SHOWN:
MORTAR, 81 MILLIMETER: M29
CANNON, 81 MILLIMETER MORTAR: M29
MOUNT, MORTAR, 81 MILLIMETER, M23 (Mount consists of Baseplate and Bipod)

SHOWN:
MORTAR, 81 MILLIMETER: M29
CANNON, 81 MILLIMETER MORTAR: M29
MOUNT, MORTAR, 81 MILLIMETER, M23A1 (Mount consists of Baseplate and Bipod)

ORD A1094

Major item			
Model		*Line item No.*	*Federal stock No.*
Cannon	*Mount*		
M29 or M29E1	M23 w/baseplate	4-28680-46	1015-673-2088
M29 or M29E1	M23A1 w/baseplate	4-28680-56	1015-640-1586

General

MORTAR, 81 MILLIMETER: M29 OR M29E1, w/e, consisting of CANNON: 81-mm, M29 or M29E1; MOUNT, MORTAR: 81-mm M23 or M23A1 is a smooth bore, muzzle-loading, high angle-of-fire weapon.

The cannon consists of a tube with a base plug and a fixed firing pin for drop firing. The exterior of the cannon is helically grooved to reduce weight and aid in heat dissipation.

The mount consists of a bipod with traversing and elevating mechanisms and a spring-type shock absorber which absorbs the shock of recoil in firing. The baseplate, composed of inner and outer ring assemblies, supports and alines the cannon.

CANNON, 81-MILLIMETER MORTAR: M29E1, can be combined with either the MOUNT, MORTAR: 81-mm, M23 or M23A1.

Differences among models

The cross-leveling mechanism of mount M23 consists of a turnbuckle and clamp arrangement, while that of the mount M23A1 has an adjustable sliding mechanism on left leg. The baseplate of mount M23 has three baseplate latches, while the baseplate of mount M23A1 does not have such latches.

Data plate location

Cannon data are stamped on the underside of the base plug. Mount data are on the mount identification plate attached to the right side of the yoke assembly. Baseplate data are on the identification plate attached to the top surface of the outer ring assembly.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Cannon:	
Weight	28 lb
Length of bore	14.64 cal
Length overall	4 ft, 3 in.
Type of firing mechanism	fixed firing pin
Mount:	
Weight:	
Mount w/o baseplate	31 lb
Baseplate (M23 and M23A1)	48 lb
Elevation (approx)	40 to 85°
Traverse, right or left (approx)	4°

AMMUNITION

Types ....HE; ILLUM; SMOKE, FS; SMOKE, WP; and TP

PERFORMANCE

Muzzle velocity:	
CARTRIDGE, 81 MILLIMETER: (full charge)	
HE (M43A1) and TP (M43A1)	698 fps
HE (M56 and M56A1)	578 fps
HE (M362)	770 fps
ILLUM (M301A1 and M301A2)	578 fps
SMOKE, FS (M57 and M57A1)	578 fps
SMOKE, WP (M57 and M57A1)	578 fps
PROJECTILE, 81 MILLIMETER: training, M68 (ignition cartridge only	172.8 fps
Maximum range (45° elevation):	
CARTRIDGE, 81 MILLIMETER: (full charge)	
HE (M43A1) and TP (M43A1)	3,865 yd
HE (M56 and M56A1)	2,586 yd
HE (M362)	3,987 yd
ILLUM (M301A1 and M301A2) (51⅛° elevation)	2,300 yd
SMOKE, FS (M57 and M57A1)	2,425 yd
SMOKE, WP (M57 and M57A1)	2,482 yd
PROJECTILE, 81 MILLIMETER: training, M68 (ignition cartridge only)	810 yd
Rate of fire:	
Normal	18 rd per min
Maximum	30 rd per min

EQUIPMENT

Sighting and fire control:*
AIMING POST: M1A2 or M10
AIMING POST: M6 (when not pack transported)
FUZE SETTER: M14 (wrench type)
FUZE SETTER: M25 or M27
SIGHTUNIT, M34A2

*For characteristics and data, see item in sections 14 and 18.

TABLE, FIRING: 81-AB-1
TABLE, FIRING: 81-AD-1 (abr)
TABLE, FIRING: 81-AE-1 (abr)
TABLE, FIRING: 81-AF-1 (abr)
TABLE, FIRING: 81-AG-1 (abr)
TABLE, FIRING: 81-AH-1 (abr)
TABLE, FIRING: 81-B-5 (abr)
TABLE, FIRING: 81-F-2 (abr)
TABLE, FIRING: 81-N-1 (abr)
TABLE, FIRING: 81-S-2 (abr)
TABLE, FIRING: 81-T-2 (abr)
TABLE, FIRING: 81-V-2 (abr)
TABLE, FIRING: 81-Z-2 (abr)

Basic Issue Items: See TM 9-3064, C1.

INSTRUCTIONAL MATERIAL

GRAPHIC TRAINING AID: See DA Pam 310-5
PROJECTILE, 81-MILLIMETER: training, M68
FIN ASSEMBLY, 81-MILLIMETER CARTRIDGE: M6, for mortar cartridge, training, M68.
TRAINER, MORTAR: subcaliber, pneumatic, M32 or M32A1.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mortar per wood box

Length	4 ft, 7 in.
Width	7 in.
Height	7 in.
Volume	1.4 cu ft
Gross weight	40 lb
Ship tons	0.04

Shipped 1 mount M23 (T62 unmodified), w/baseplate or 1 mount M23A1 (T62 modified) w/baseplate per wood box.

Length	3 ft
Width	1 ft, 3 in.
Height	9 in.
Volume	3.0 cu ft
Gross weight	78 lb
Ship tons	0.07

Outside Continental United States

Shipped

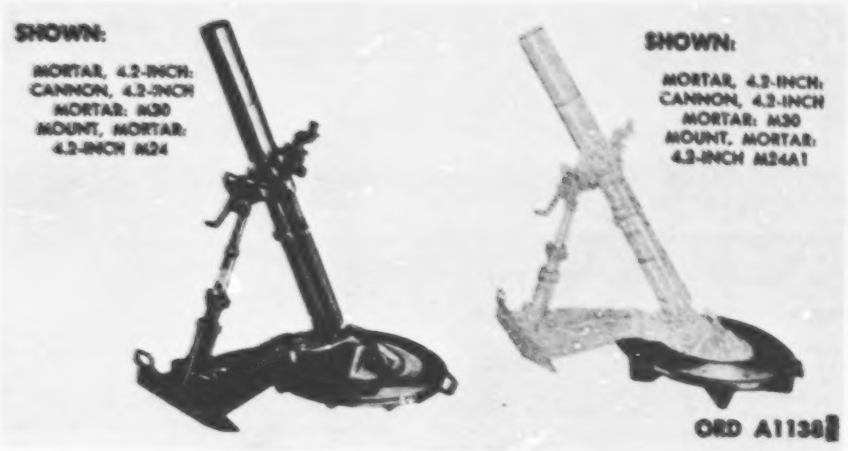
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-90, SNL A-42, TM 9-1260, TM 9-3071-1, TM 9-3064.

MORTAR, 4.2-INCH: (CANNON M30 ON MOUNT M24 OR M24A1) W/EQUIPMENT



ORD A1138

Model		*Major item Line item No.*	*Federal stock No.*
Cannon	*Mount*		
M30	M24	M68282	1015-322-9720
M30	M24A1		1015-840-1840

General

MORTAR, 4.2-INCH: w/equipment, consisting of CANNON, 4.2-INCH: M30 with MOUNT, MORTAR, 4.2-INCH: M24 or M24A1, is a rifled, muzzle-loading weapon intended for high-angle firing and is used against all but armored targets. The cannon is fired from the ground, using mount M24 or M24A1.

CANNON, 4.2-INCH, MORTAR: M30, consists of a tube closed at the breech end by a tube cap with an integral firing pin for drop fire. The tube cap is supported and alined on a baseplate and standard assembly which is equipped with screw-type mechanisms for elevation and traverse.

MOUNT, MORTAR: 4.2-INCH, M24 or M24A1, consists of a rotator assembly, a bridge assembly, a standard assembly, and a baseplate assembly. The upper surface of the rotator assembly is used to receive the bridge assembly which acts as a linking unit between the baseplate assembly and the standard assembly. The standard assembly is the support unit for connection to the gun cannon at its forward end and is equipped with screw-type mechanisms for elevation and traverse. The standard assembly also houses a spring-type recoil mechanism. The breech end of the mortar, a double spherical projection, fits into a cap at the rear of the bridge.

Differences among models:

The mount M24A1 is provided with a one-piece steel baseplate assembly and the mount M24 with a magnesium baseplate assembly which consists of an inner baseplate and an outer baseplate ring.

Data plate location:

Mortar data are found on the mortar nameplate which is located on the coupling and sight mount assembly. The mount data are found on the mount nameplate which is located on the rotator assembly.

Classification:

Cannon M30:
Mount M24 Standard B (OTCM 37196)
Mount M24A1 Standard A (OTCM 37196)

CHARACTERISTICS

Cannon:	
Weight	156.5 lb
Length of bore	5 ft
Length overall	5 ft, 8⅛ in.
Type of firing mechanism	fixed firing pin
Mount:	
Weight:	
Mount M24A1 w/o baseplate	290.0 lb
Mount M24A1 w/o baseplate (alternate rotator assembly)	321.5 lb
Base plate (M24A1)	193.0 lb
Mount M24 w/o baseplate	321.5 lb
Mount M24 w/o baseplate (alternate rotator assembly)	290.0 lb
Baseplate (M24)	221.0 lb
Baseplate (M24—alternate manufacture)	228.0 lb
Elevation (M24 and M24A1)	58 deg, 47 min
Minimum (in relation to vehicle)	45 deg
Maximum (in relation to vehicle)	59 deg
Traverse, right or left (M24 and M24A1)	7 deg, 2 min

AMMUNITION

Types	CHEM (CG, H, HD, HT), HE, ILLUM, and SMOKE, PWP, or WP.

PERFORMANCE

Muzzle velocity:	
CARTRIDGE, 4.2-INCH: (full charge):	
HE (M329 and M329B1)	966 fps
HE (M3A1, M3, and M3 alternate)	845 fps
CHEM (M2A1), M2, M2 alternate)	845 fps
ILLUM (M335)	931 fps
Maximum range:	
CARTRIDGE, 4.2-INCH (45° elevation):	
HE (M329 and M329B1)	5,931 yd
HE (M3A1, M3, and M3 alternate)	5,050 yd
CHEM (M2A1, M2, M2 alternate)	5,050 yd
ILLUM (M335) (51° elevation)	5,272 yd
Rate of fire:	
Normal	5 rd per min
Maximum	20 rd per min

EQUIPMENT

Sighting and fire control *:

EQUIPMENT—Continued

For M30 mortar on M24 or M24A1 mount:
- **FUZE SETTER: M27**
- **POST, AIMING: M1A2**
- **QUADRANT, FIRE CONTROL:** gunner's, M1A1, w/case
- **SIGHTUNIT: M34A2**
- **TABLE, FIRING: FT 4.2-F-1; FT 4.2-F-1; FT 4.2-F-1 (abr).**
- **SCALE, GRAPHICAL FIRING: M57**

Basic Issue Items: See TM 9-2008.

INSTRUCTIONAL MATERIAL

CANNON, 60-MILLIMETER MORTAR, SUBCALIBER: M31.
GRAPHIC TRAINING AID: See DA Pam 310-5.
TRAINER, MORTAR: Subcaliber, pneumatic, M32 or M32A1.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mortar per wood box.

Length	4 ft, ¼ in.
Width	1 ft, 1⅝ in.
Height	10⅝ in.
Volume	4.2 cu ft
Gross weight	210 lb
Ship tons	0.15

Shipped 1 mount per wood box (M24 or M24A1).

Length	5 ft, 9⅝ in.
Width	3 ft, 11⅝ in.
Height	1 ft, 1⅝ in.
Volume	20.8 cu ft
Gross weight	725 lb
Ship tons	0.52

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-92, SNL A-85, TM 9-2008, TM 9-2000, TM 9-1015-217-35, TM 9-2300-308-12.

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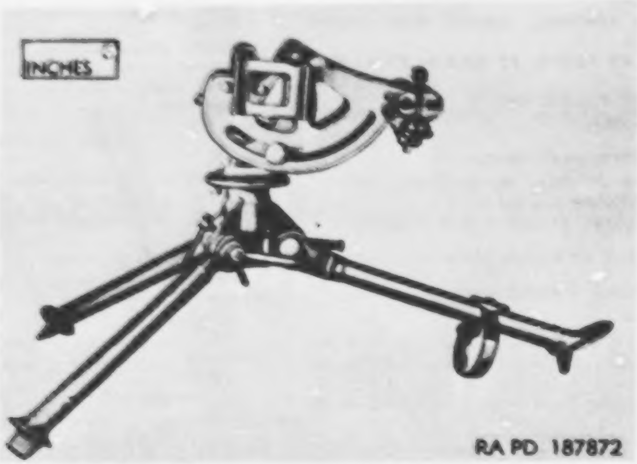
* For characteristics and data, see item in sections 12, 14, and 18.

MOUNT, TRIPOD, RIFLE: M1917A2, W/E



RA PD 187872

Model	*Major item Line item No.*	*Federal stock No.*
M1917A2	4-25591-06	1015-322-9741

General

MOUNT, TRIPOD, RIFLE: M1917A2, w/e, is a lightweight, portable, folding mount. The mount consists of a cradle assembly which rotates in a leg and socket group. Each tripod leg is adjusted separately and can be placed in any desired position. The cradle assembly supports the weapon at the gun pintle and at the elevating and traversing mechanism assembly. The gun pintle is easily disengaged from the cradle assembly; therefore, it may remain attached to the rifle, when the rifle is removed, to facilitate handling. This mount is an interim mount for the 57-mm and 75-mm recoilless rifles. It is to be replaced by MOUNT, TRIPOD, WEAPON: M74. It is similar to MOUNT, TRIPOD, MACHINE-GUN: caliber .30, M1917A1 except that the rear leg is shorter, being only 34 inches long.

Differences among models

Data plate location

The identification plate of the mount is located on the rear leg, directly above the tripod strap. Because the cradle assembly of the mount M1917A2 is identical to that of the caliber .30 machinegun tripod mount M1917A1, the designation M1917A1 may still be stamped on the right side of the cradle.

Classification: Standard B (OTCM 36641).

CHARACTERISTICS

Weight	53 lb
Dimensions (when folded for transportation):	
Length	2 ft, 8½ in.
Width	10 in.
Height	1 ft, 7½ in.
Traversing range:	
Mechanical	2° 49 min (50 mil)
Least increment	3 min (1 mil)
Free	360° (6,400 mil)
Elevation	65°
Depression	28°

EQUIPMENT

Basic Issue Items: See ORD 7 SNL C-91.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

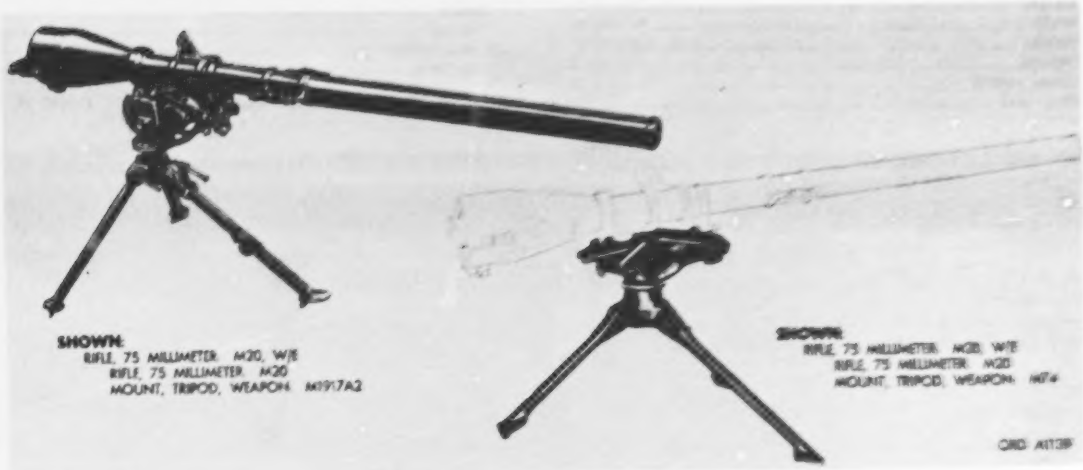
Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL C-91, TM 9-3062, TM 9-3140.

RIFLE, RECOILLESS, 75-MILLIMETER: M20, W/E



SHOWN:
RIFLE, 75 MILLIMETER: M20, W/E
RIFLE, 75 MILLIMETER: M20
MOUNT, TRIPOD, WEAPON: M1917A2

SHOWN:
RIFLE, 75 MILLIMETER: M20, W/E
RIFLE, 75 MILLIMETER: M20
MOUNT, TRIPOD, WEAPON: M74

ORD A1139

Model	*Major item Line item No.*	*Federal stock No.*
M20	R96347	1015-691-1289

General

RIFLE, RECOILLESS, 75-MILLIMETER: M20, W/E is a recoilless, portable weapon designed to be fired from the mount M1917A2 or M74.* It is an air-cooled single-loading weapon that uses fixed ammunition. The rifle is designed for direct or indirect fire.

The rifle consists of a barrel group and a breech mechanism group. The barrel group consists of a tube, tube handle, mounting bracket, hinge block and vent bushing. The breech mechanism group is attached to the rear end of the barrel group and controls the opening and closing of the breech and the firing of the ammunition. The breech mechanism group consists of the breech operating handle housing, the trigger and firing components of the rifle, the closed-breech lock, breechblock, breechblock hinge, and extractor assembly.

Differences among models

Data plate location:

Rifle data are stamped on the rear face of the barrel chamber. The tube data are stamped on the muzzle end of the barrel tube.

Classification: Limited Standard (OTCM 37119).

CHARACTERISTICS

Rifle w/o mount:	
Weight	114 lb, 8 oz
Length	6 ft, 10 in.
Length of bore	5 ft, 5¼ in.
Rifling:	
Length	(approx) 5 ft, 4 in.
Number of grooves	28
Twist, right hand	one turn in 22 calibers
Type of breechblock	interrupted-thread
Type of firing mechanism	percussion

Estimated usable life:	
Tube	5,000 rd
Vent assembly	500 rd

AMMUNITION

Types .... HE; HEAT-T; HEP-T; WP; and TP

PERFORMANCE

Muzzle velocity:	
HE; TP; WP	900 fps
HEAT-T	1,000 fps
HEP-T	1,400 fps
Range:	
HE; TP (at 43° elevation)	6,365 yd
WP (at 43° elevation)	6,965 yd
HEAT (at 12° elevation)	3,500 yd
HEP (at 42° elevation)	7,240 yd
Rate of fire	

EQUIPMENT

Sighting and fire control:**
BINOCULAR: M17A1
FUZE SETTER: M14
MOUNT, TELESCOPE: M78
QUADRANT, FIRE CONTROL: gunner's, M1A1, with CASE
SIGHTUNIT: M34A1 or M34A2 or M34
TABLE FIRING: FT-BJ-2 (abr)
TABLE, FIRING: FT 75-BE-1 (abr)
TABLE, FIRING: FT 75-BB-3 (abr)
TABLE, FIRING: FT 75-B-1 (abr)
TELESCOPE: M85D or M85A1C or M85C

Basic Issue Items: See ORD 7 SNL C-74.

INSTRUCTIONAL MATERIAL

RIFLE, CALIBER .30, SUBCALIBER: M7
CARTRIDGE, CALIBER .30: ball, M2
GRAPHIC TRAINING AID AND DEVICES: See DA Pam 310-5

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* For characteristics and data, see item in sections 4 and 8.
** For characteristics and data, see item in sections 14, 18, and 27.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 rifle w/mount per crate.

Length	7 ft, 1-9/16 in.
Width	1 ft, 8¾ in.
Height	1 ft, 1-11/16 in.
Volume	12.1 cu ft
Gross weight	240 lb
Ship tons	0.3

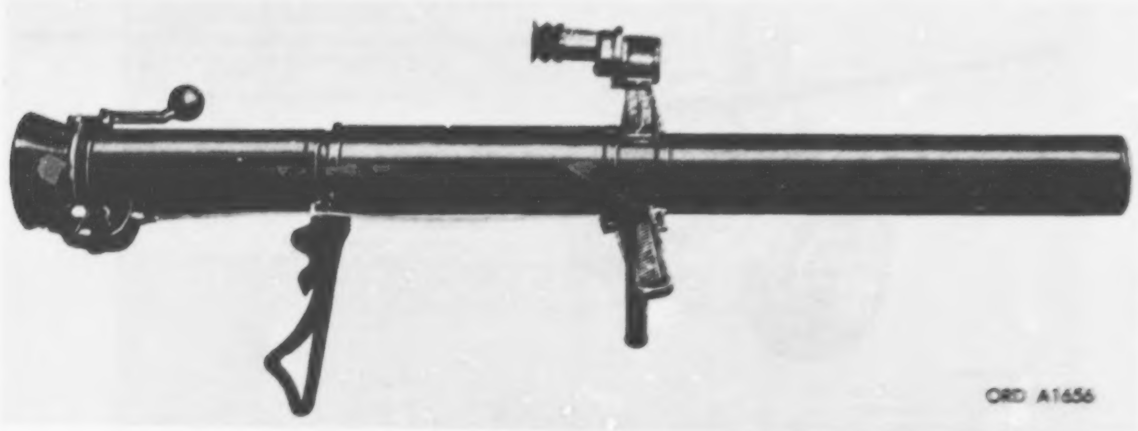
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 23-81, SNL C-74, TM 9-3140, TM 9-3140-34.

RIFLE, 90 MILLIMETER: M67, W/E


ORD A1656

Major item

Model Rifle	Model Mount	*Line item No.*	*Federal stock No.*
M67		4-35890-00	1015-657-7584

General

RIFLE, 90 MILLIMETER: M67, w/e, is a lightweight, portable weapon. The rifle M67 is designed to be fired from the ground or from the shoulder, and is an air-cooled, single-loading weapon using fixed ammunition. The rifle M67 is designed for direct firing only, and sighting and fire control instruments for this purpose are furnished with the weapon. The rifle M67 consists basically of a front mounting bracket group, cable assembly, and face shield group, breech and hinge mechanism group, rear mounting bracket group, and rifle tube.

Differences among models

Data plate location

The rifle identification data are stamped near the breech-end, on top of the rifle tube.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	35 lb
Length	4 ft, 5 in.
Rifling:	
Twist, right-hand	one turn in 200 calibers
Type of breechblock	interrupted thread
Type of firing mechanism	percussion
Estimated usable life, tube	2,000 rds

AMMUNITION

Type	HEAT

PERFORMANCE

Muzzle velocity:	
HEAT	700 fps
Range:	
HEAT	450 meters

EQUIPMENT

Sighting and fire control:*
LIGHT, INSTRUMENT: T25
MOUNT, TELESCOPE: M110
TABLE, FIRING: FT 90-0-1
TELESCOPE: M103
Basic Issue Items: See appendix III, TM 9-1015-223-12.

INSTRUCTIONAL MATERIAL

GRAPHIC TRAINING AID: See DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 rifle per shipping container.

Length	4 ft, 10½ in.
Width	1 ft, 7 in.
Height	1 ft, 6⅝ in.
Volume	12.06 cu ft
Gross weight	100 lb
Ship tons	0.30

Outside Continental United States

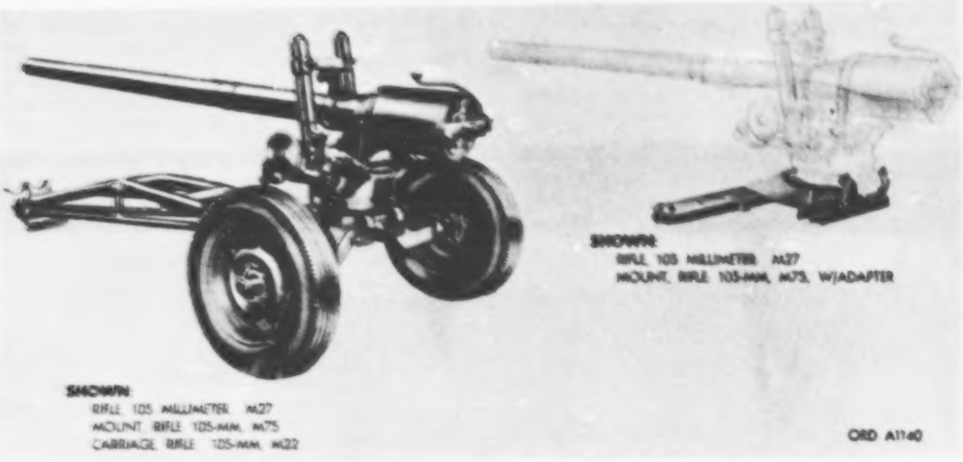
Shipped 1 rifle per shipping container.

Length	4 ft, 10½ in.
Width	1 ft, 7 in.
Height	1 ft, 6⅝ in.
Volume	12.06 cu ft
Gross weight	100 lb
Ship tons	0.30

References: TM 9-1015-223-12, TM 9-1015-223-20P, TM 9-1015-223-34, TM 9-1015-223-35P.

* For characteristics and data, see item in section 14.

RIFLE, 105 MILLIMETER: M27 OR M27A1; MOUNT, RIFLE: 105-MM, M75 OR M75A1, W/E


SHOWN:
RIFLE, 105 MILLIMETER, M27
MOUNT, RIFLE 105-MM, M75
CARRIAGE, RIFLE, 105-MM, M22
SHOWN:
RIFLE, 105 MILLIMETER, M27
MOUNT, RIFLE 105-MM, M75, W/ADAPTER
ORD A1140

Major Item

Model		*Line item No.*	*Federal stock No.*
Rifle	*Mount*		
M27	M75	4-B5910-10	1015-324-9433
M27	M75A1	4-B5910-15	1015-322-9743
M27A1	M75	4-B5910-20	1015-591-0192
M27A1	M75A1	4-B5910-25	1015-322-9742

General

RIFLE, 105 MILLIMETER: M27 or M27A1 on MOUNT, RIFLE: 105-mm, M75 or M75A1, is a lightweight, portable, air-cooled, single-loading, recoilless weapon designed to fire fixed ammunition. They are employed as antitank and antipersonnel weapons.

The rifle consists of a tube, firing cable, fulcrum ring, breechblock operating lever assembly, chamber, trunnion assembly, trunnion ring, and trigger block.

The mount consists of the equilibrator and elevating mechanism assembly, traveling lock assembly, and a top and bottom carriage assembly. With the use of an adapter, the mount is designed for truck mounting, the adapter being attached to the bottom carriage.

Differences among models

The difference between the mount M75 and M75A1 is in the adapter. The mount M75A1 has an aluminum adapter light enough to be handled by one man and in addition can be attached to all three types of "jeeps." The mount M75 has a steel adapter. A forcing cone was added in the chamber of the rifle M27, making it a M27A1.

Data plate location

Classification: Standard C (OTCM 37119).

CHARACTERISTICS

Rifle w/o mount:	
Weight	365 lb
Length	11 ft, 2¼ in.
Length of bore	8 ft, 11⅛ in.
Rifling:	
Length	8 ft, 9⅞ in.
Number of grooves	36
Twist, right-hand	one turn in 20 calibers
Type of breechblock	interrupted thread
Type of firing mechanism	percussion
Estimated accuracy life	2,000 rd
Estimated life of vent assembly	600 rd
Mount:	
Weight:	
W/adapter for M75	336 lb, 8 oz
W/adapter for M75A1	272 lb
Elevation	50°
Depression	18°
Traverse:	
M75	60°
M75A1	80°

AMMUNITION

Types	HE, HEAT, HEP, HEP-T, HEAT-T, and WP

PERFORMANCE

Muzzle velocity:	
HE, WP	1,120 fps
HEAT:	
M324	1,250 fps
M341	1,650 fps
HEP	1,265 fps
HEP-T	1,690 fps
Range:	
HE (at 43° elevation)	9,367 yd
WP (at 43° elevation)	9,245 yd
HEAT:	
M324 (at 9° elevation)	3,500 yd
M341 (at 6° elevation)	3,000 yd
HEP (at 9° elevation)	3,500 yd
HEP-T (at 40° elevation)	7,625 yd

EQUIPMENT

Sighting and fire control:*
MOUNT, SIGHT: M86 (T155)
MOUNT, TELESCOPE: M85 (T158)
TABLE, FIRING: FT 105-AH-3 (abr)
TABLE, FIRING: FT 105-AI-2 (abr)

* For characteristics and data, see item in sections 14 and 16.

TABLE, FIRING: FT 105-AK-1 (abr)
TABLE, FIRING: FT 105-AO-2 (abr)
TABLE, FIRING: FT 105-AP-2 (abr)
TELESCOPE: M94 or M90C

Basic Issue Items: See ORD 7 SNL C-77.

INSTRUCTIONAL MATERIAL

GRAPHIC TRAINING AID AND DEVICES: See DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

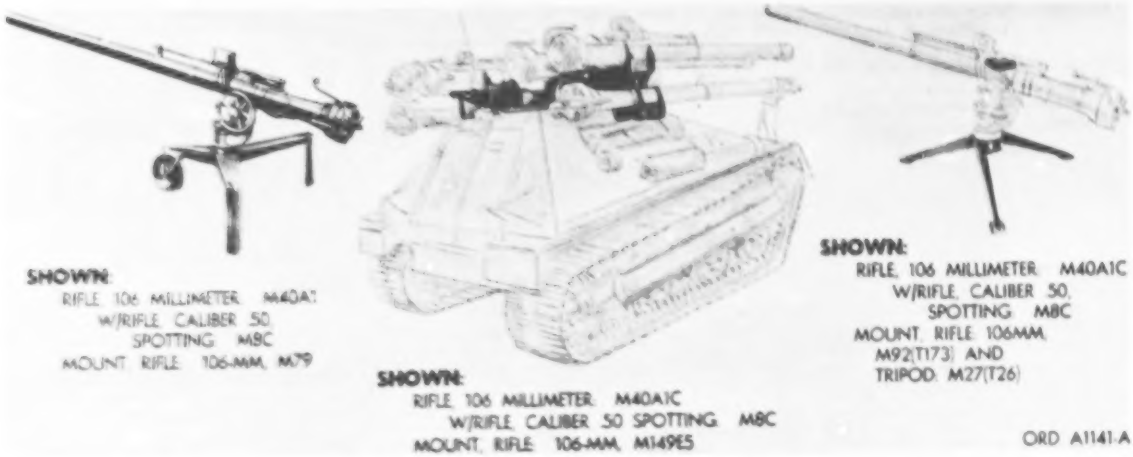
Shipped	
Length	12 ft, 1 in.
Width	2 ft, 2⅛ in.
Height	1 ft, 6⅞ in.
Volume	42 cu ft
Gross weight	470 lb
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: FM 21-6, SNL C-77, TM 9-8058.

RIFLE, 106-MILLIMETER: M40A1 OR M40A1C; W/RIFLE, CALIBER .50, SPOTTING: M8C; MOUNT, RIFLE: 106-MM, M79, M92 (T173), OR M149E5



SHOWN:
RIFLE, 106 MILLIMETER: M40A1
W/RIFLE, CALIBER .50,
SPOTTING: M8C
MOUNT, RIFLE: 106-MM, M79

SHOWN:
RIFLE, 106 MILLIMETER: M40A1C
W/RIFLE, CALIBER .50 SPOTTING: M8C
MOUNT, RIFLE: 106-MM, M149E5

SHOWN:
RIFLE, 106 MILLIMETER: M40A1C
W/RIFLE, CALIBER .50,
SPOTTING: M8C
MOUNT, RIFLE: 106MM,
M92(T173) AND
TRIPOD: M27(T26)

ORD A1141-A

Model		*Line item No.*	*Federal stock No.*
Rifle	*Mount*		
M40A1	M79	6-35960-20	
M40A1C	M92 (T173)		
M40A1C	M149E5		

General

RIFLE, 106-MILLIMETER: M40A1 or M40A1C; w/RIFLE, CALIBER .50, SPOTTING: M8C; MOUNT, RIFLE: 106-mm, M79, M92 (T173), or M149E5, is a recoilless, air-cooled, breech-loading, portable weapon capable of defeating heavy armor. The rifle M40A1 with mount M79 is designed for use as a ground antitank weapon or as a self-propelled antitank weapon when mounted on the body of ¼-ton 4 x 4 utility trucks M38C and M38A1C. The rifle M40A1 with mount M92 is designed for use on the light weapons carrier M274 (mule) with the tripod M27 provided for ground use. The rifle M40A1C with mount M92 (T173) is designed for use as a ground auxiliary antitank weapon in conjunction with multiple 106-mm full-tracked, self-propelled rifle M50. When the rifle M40A1C is mounted on the self-propelled vehicle M50, mount M149E5 is used. Mount M149E5 provides mounting positions for six rifles M40A1C.

The rifles M40A1 and M40A1C consist of a barrel group, breechblock group, vent assembly, and firing cable group. The barrel group is composed principally of a rifle tube, chamber, quick-breakdown sleeve, spotting rifle front mounting bracket, and spotting rifle rear mounting bracket. The breechblock group is composed principally of a firing pin housing assembly, breechblock hinge, cocking cam plate, breechblock operating lever dog, extractor, sear, and breechblock operating lever assembly. The vent assembly consists of a ring assembly, recoil compensating ring, and ring retaining screw. The firing cable group is composed principally of the caliber .50 spotting rifle firing cable, 106-mm firing cable, rifle firing cable operating levers, trigger, trigger spring, trigger housing, trigger housing cover, and lanyard rod assembly.

The caliber .50 spotting rifle M8C consists of the magazine assembly, bolt slide group, bolt assembly, firing mechanism assembly, gas cylinder group, and receiver and barrel group.

The mount M79 is composed of an elevating and firing assembly, traversing assembly, and elevating and traversing base assembly. The M92 (T173) is composed of an elevating and firing assembly, traversing assembly, and adapter assembly. The tripod M27 is a three-legged folding base for the mount M92 when the weapon is used on the ground. The M149E5 consists principally of the turret, elevating mechanism, traversing mechanism, and the weapons mount and control system.

Differences among models

The projectile indicator has been added to the barrel of the 106-mm rifle M40A1C. The bottom of the breechblock operating lever of the 106-mm rifle M40A1C is arranged so that it can be engaged by a breech actuator for hydraulic operation of the breech between the closed and safe positions when the rifle is used as part of the multiple 106-mm full-tracked, self-propelled rifle M50. The breechblock operating lever of the 106-mm rifle M40A1C is designed to provide clearance for movement of the lever when the rifle is used as part of the multiple 106-mm full-tracked, self-propelled rifle M50.

The mount M79 incorporates an integral elevating and traversing base assembly of the wheelbarrow-tripod type which is designed for use as both ground mount and for mounting on ¼-ton 4 x 4 utility trucks M38C and M38A1C. The mount M92 (T173) does not incorporate an integral base assembly but instead is mounted on a separate tripod. The 106-mm rifle mount M92 (T173) is basically identical to the traversing and elevating and firing assemblies of the 106-mm rifle mount M79 except for the addition of an adapter assembly for attaching the mount on the tripod. The mount M149E5 provides six positions for six rifles whereas the M79 and M92 (T173) provide one each.

Data plate location

Rifles M40A1 and M40A1C data appear on the rear face of the rifle chamber. Mounts M79 and M92(T173) identification plates are located on the left side of the traversing assembly. Rifle M8C data appears on top of the receiver. Mount M149E5 data is located

Classification

Rifle M40A1 with mount M79 ......Standard A (OTCM 36841)
Rifle M40A1C with mount
M92 (T173) ....Standard A (OTCM 37594)

CHARACTERISTICS

Rifle w/o mount (M40A1 or M40A1C):	
Weight (rifle only)	261 lb
Weight (rifle with spotting rifle and accessories)	288 lb
Length	11 ft, 2 in.
Length of tube	9 ft, 4 in.
Rifling:	
Length	8 ft, 9 13/16 in.
Number of grooves	36
Twist, right-hand	one turn in 20 calibers
Type of breechblock	interrupted thread
Type of firing mechanism:	
M40A1 or M40A1C w/mount M79 or M92 (T173)	percussion
M40A1C w/mount M149E5	percussion and electrical
Estimated accuracy life	2,500 rd
Mount:	
Weight:	
M79	196 lb
M92 (T173)	117 lb
M149E5	1,445 lb
Elevation (maximum):	
M79	65°
M92 (T173)	50°
M149E5	20°
Depression (maximum):	
M79	−17°
M92 (T173)	−17°
M149E5	−10°
Traverse (R or L):	
M79	360°
M92 (T173)	360°
M149E5	40°
Operation of firing linkage:	
M79	manual
M92 (T173)	manual
M149E5	manual and electrical

AMMUNITION

Types	HEAT and HEP-T

PERFORMANCE

Muzzle velocity:	
HEAT	1,650 fps
HEP-T	1,685 fps
Range:	
HEAT (6⅔° elevation)	8,000 yd
HEP-T (20⅓° elevation)	7,515 yd

EQUIPMENT

Sighting and fire control:*

For M40A1 or M40A1C rifle on mount M149E5
- MOUNT, TELESCOPE: M90 (T155)
- TABLE, FIRING: FT 106-A-1 (abr)
- TABLE, FIRING: FT 106-B-2 (abr)
- TELESCOPE, ELBOW: M92D (T168E1)

Basic Issue Items: See ORD 7 SNL C-98 and TM 9-2350-312-12.

INSTRUCTIONAL MATERIAL

CARTRIDGE, CALIBER .50: ball, M2
RIFLE, CALIBER .50, SUBCALIBER: M9

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length ……………………
Width ……………………
Height ……………………
Gross weight ……………………
Volume ……………………
Ship tons ……………………

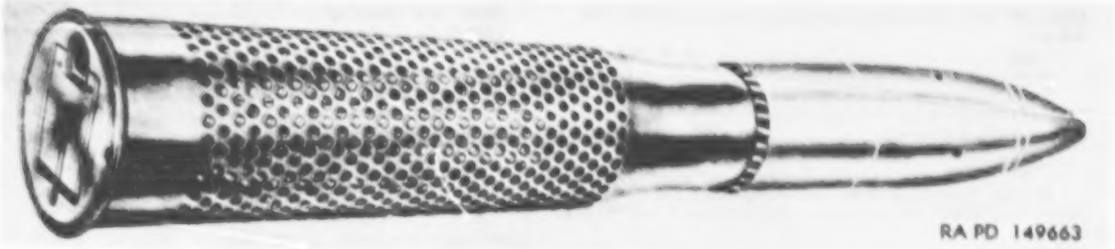
Outside Continental United States

Shipped
Length ……………………
Width ……………………
Height ……………………
Gross weight ……………………
Volume ……………………
Ship tons ……………………

References: SNL C-98, TM 9-1000-205-12, TM 7-1015-221-34, TM 9-2350-312-12.

*For characteristics and data, see item in section 14.

RIFLE, CALIBER .30, SUBCALIBER: M7



RA PD 149663

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M7		1015-780-5872

General

RIFLE, CALIBER .30, SUBCALIBER: M7, consists mainly of a 75-mm recoilless rifle cartridge case, a modified, vented caliber .30 machinegun barrel, a cut-off 75-mm recoilless rifle projectile, and a breech assembly. It is used in training personnel to operate the 75-mm recoilless rifle M20 or T21E12. The primer body is removed from the 75-mm cartridge case. A pin which is fixed to the base of the 75-mm cartridge case fits into a small slot in the breech body and prevents the breech body from turning when the training device is assembled. The breech body has a door cover which contains the firing pin. Holes, drilled from the outer surface of the caliber .30 machinegun barrel into the bore, allow a portion of the propellant gases to escape through the 75-mm cartridge case into the 75-mm recoilless rifle chamber, and finally through the openings in the breech of the 75-mm recoilless rifle. This results in a miniature back-blast and at the same time reduces the muzzle velocity of the subcaliber projectile to approach that of the 75-mm recoilless rifle ammunition. The muzzle-end of the caliber .30 machinegun barrel, which is threaded on its outer surface, protrudes through a hole drilled in the cut-off 75-mm projectile. The 75-mm projectile is cut off just forward of the rotating band, and when assembled, the projectile base slides into the cartridge case and is held in place by the breech body which screws onto the end of the caliber .30 machinegun barrel.

Differences among models

Data plate location

Classification: Standard C (OTCM 36641).

CHARACTERISTICS

Weight	
Length overall	2 ft, 4⅝ in.
Length of tube	1 ft, 11$\frac{13}{16}$ in.

Rifling:

Length	1 ft, 9⅝ in.
Twist, right-hand	one turn in 10 in.
Number of grooves	4

AMMUNITION

Type	cartridge, ball, cal. .30, M2

PERFORMANCE

Muzzle velocity	1,300 fps
Range	1,950 yd

EQUIPMENT

Sighting and fire control:

Use sighting equipment issued with primary weapon listed in GENERAL paragraph.

Basic Issue Items: See ORD SNL C-88, section 18.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 rifles per wood box.

Length	2 ft, 8½ in.
Width	9 in.
Height	5½ in.
Volume	1 cu ft
Gross weight	55 lb
Ship tons	0.025

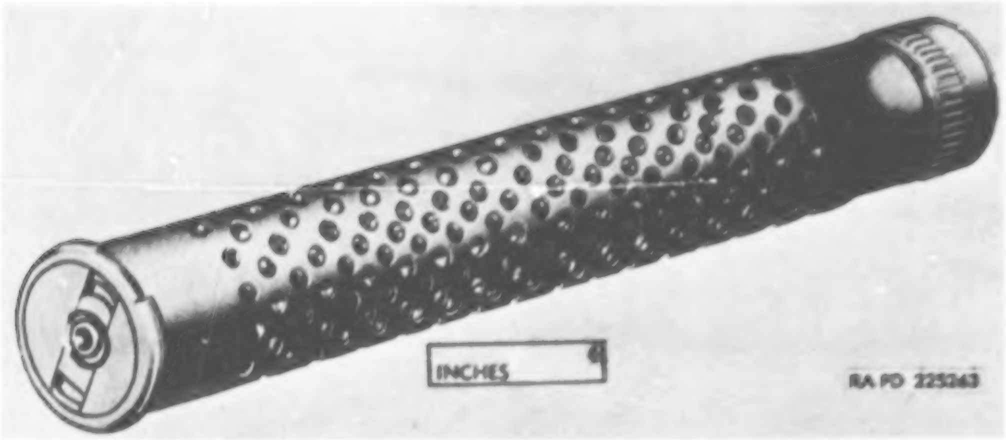
Outside Continental United States

Shipped 2 rifles per wood box.

Length	2 ft, 8½ in.
Width	9 in.
Height	5½ in.
Volume	1 cu ft
Gross weight	55 lb
Ship tons	0.025

References: SNL C-88, section 18; TM 9-3140; TM 9-3140-34.

RIFLE, CALIBER .30, SUBCALIBER: M9



Secondary item

Model	*Line item No.*	*Federal stock No.*
M9	....	1015-214-0942

General

RIFLE, CALIBER .30, SUBCALIBER: M9, consists of a cartridge case, modified caliber .30 machinegun barrel, cutoff projectile, and a breech assembly. It is used to provide more extensive training in laying and firing the 106-mm rifle M40A1 or M40A1C than would be permissible with the larger ammunition. The use of smaller bore ammunition prevents wear on the regular piece during practice and is less costly. The primer body is removed from the 106-mm cartridge case and a hole is drilled through the base of the cartridge case to receive the barrel bushing. A pin in the base of the cartridge case projects into a small slot in the bushing and prevents the bushing from turning when the rifle is assembled. The barrel has 24 holes drilled in its bore to reduce the muzzle velocity of the subcaliber round. Perforating the barrel also creates a back blast which simulates the back blast of the 106-mm rifle. The caliber .30 barrel is held in place at the muzzle end by a barrel nut which fits inside of the cutoff projectile. The subcaliber round is hand fed into the caliber .30 barrel chamber. The barrel bushing has a trapdoor or hinge which contains a floating firing pin. The 106-mm rifle firing pin is used to strike the subcaliber rifle M9 pin by percussion, thus causing the subcaliber rifle firing pin to indent the cartridge. The cartridge case is extracted by hand. The extractor of the 106-mm rifle is removed when using the subcaliber rifle M9 to prevent removal of the rifle M9 each time the breechblock is opened.

Differences among models

Data plate location

Classification: Standard A (OTCM (36841).

CHARACTERISTICS

Length overall	3 ft, 1 in.
Rifling:	
Length	1 ft, 9⅝ in.
Twist, right-hand	one turn in 10 in.
Number of grooves	4

AMMUNITION

Type	Cartridge, ball, cal. .30, M2

PERFORMANCE

Muzzle velocity	1,310 fps
Range (maximum)	1,360 yd

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

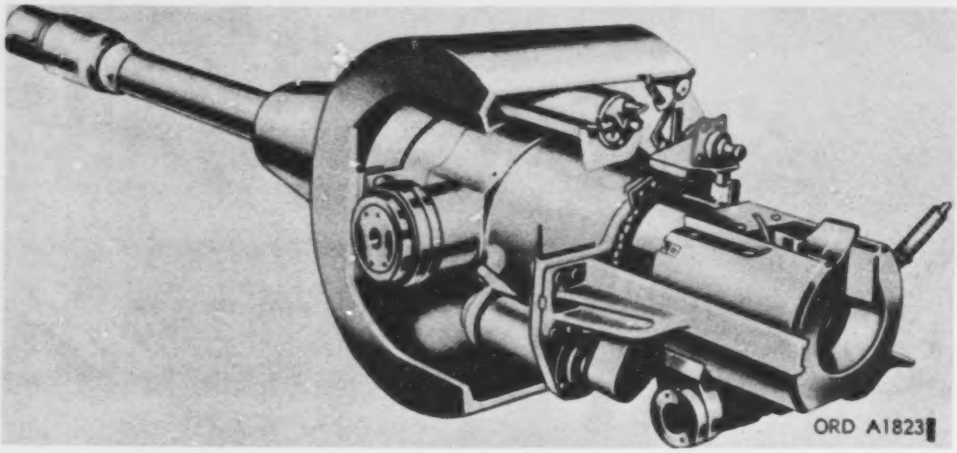
Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL C-33, Section 30; TM 9-1000-205-12; FM 23-82.

CANNON, 105 MILLIMETER HOWITZER: XM103; MOUNT, HOWITZER: 105-MM, XM139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Secondary Item

Model		*Line item No.*	*Federal stock No.*
Cannon	*Mount*		
XM103	XM139	....	....

General

CANNON, 105 MILLIMETER HOWITZER: XM103 with MOUNT, HOWITZER: 105-mm, XM139, provides the primary armament for HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, T195E1 and is primarily used for high trajectory fire.

The mount supports the cannon within a cradle and pivots in self-aligning bearings, located at each side of the cradle. The mount also provides mounting facilities for the elevation quadrant, direct fire telescope, and linkage mounts for the panoramic telescope.

The recoil mechanism is of the hydrospring, constant retarding force type.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Cannon:	
Weight:	
W/mount and fluid	2,530 lb
Including evacuator and ring lock	950 lb
Shield	365 lb
Length:	
Overall	140.15 in.
W/o muzzle brake	131.57 in.
Tube	124.40 in.
Rifling:	
Length	110 in.
Number of grooves	36
Twist, right-hand	one turn in 35 calibers to 112.725 in., one turn in 18 calibers from 112.725 in. to muzzle
Type of breechblock	sliding wedge drop block
Type of firing mechanism	percussion
Estimated accuracy life of tube	rd

Mount:	
Weight (w/fluid)	1,185 lb
Type of recoil mechanism	hydrospring
Number of recoil cylinders	1 concentric
Length of recoil:	
Normal	12 in.
Maximum	metal to metal 14 in.
Capacity of recoil mechanism	21 qt
Elevation	75 deg
Depression	6 deg
Traverse (left or right)	360 deg

AMMUNITION

Types	gas, HE, illum, leaflet, smoke (colored and WP), blank, dummy

PERFORMANCE

Muzzle velocity	1,550 fps
Range	12,000 meters
Rate of fire:	
Normal	1 rd per min
Rapid	3 rds per min

EQUIPMENT

Sighting and fire control:*
- BINOCULAR: M17A1
- FUZE SETTER: M26 with CASE, CARRYING: M66
- FUZE SETTER: M27
- MOUNT, TELESCOPE: T206
- MOUNT, TELESCOPE: T208
- PERISCOPE, TANK: M27
- PERISCOPE, TANK: XM45
- POST, AIMING: M1A2 w/COVER, AIMING POST: M401
- QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/CASE CARRYING: M82
- REFLECTOR, AIMING POST: clear, M1
- REFLECTOR, AIMING POST: red, M1
- TELESCOPE, ELBOW: T176E3
- TELESCOPE, PANORAMIC: T177

Basic Issue Items: See TM 9-2350-217-10

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* For characteristics and data, see items in sections 14, 18, 23, and 27.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9–1015–230–35, TM 9–1015–230–35P.

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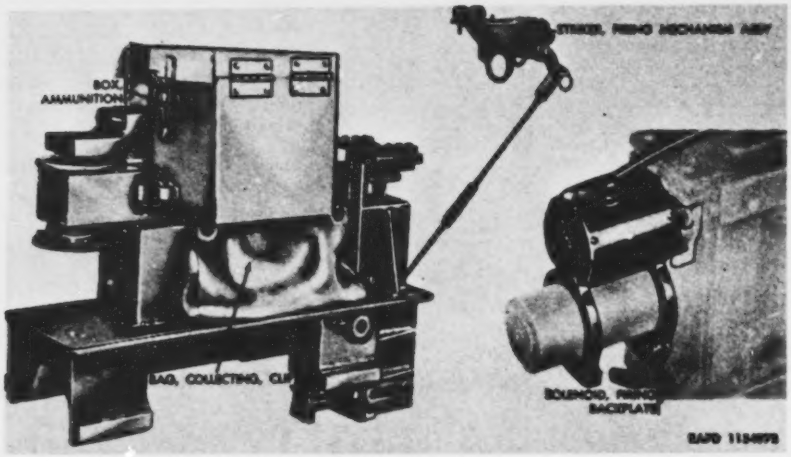
MOUNT, GUN: SUBCALIBER, CAL. .50, M19



Model	*Line item No.*	*Federal stock No.*
M19	M74344	1015–673–3572

General

MOUNT, GUN: SUBCALIBER, CAL. .50, M119, is used with a fixed heavy barrel, cal. .50 BROWNING MACHINEGUN M2 * for training purposes only. It provides practice in laying and firing the GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: TWIN, 40-MM, M42A1 **. It is installed in the left-hand breech casing of the gun in place of the left automatic loader assembly. The ammunition box located on the left side of the mount holds 40 rounds of linked ammunition for the machinegun. Actuating the firing linkage (to the striker firing mechanism assembly) of the 40-mm gun operates the firing linkage (to the solenoid, firing backplate) of the mount, to fire the cal. .50 machinegun single shot. The empty cartridge cases fall into the clip collecting bag while the links are ejected through the ammunition chute into the bag. A boresight hole in the mount coincides with the line of the bore of the 40-mm gun.

Differences among models

Classification: Standard A.

CHARACTERISTICS

Weight
Length
Width
Height

AMMUNITION

EQUIPMENT

PERFORMANCE

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per container.

Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped 1 per container.

Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: TM 9–7218, SNL A–77.

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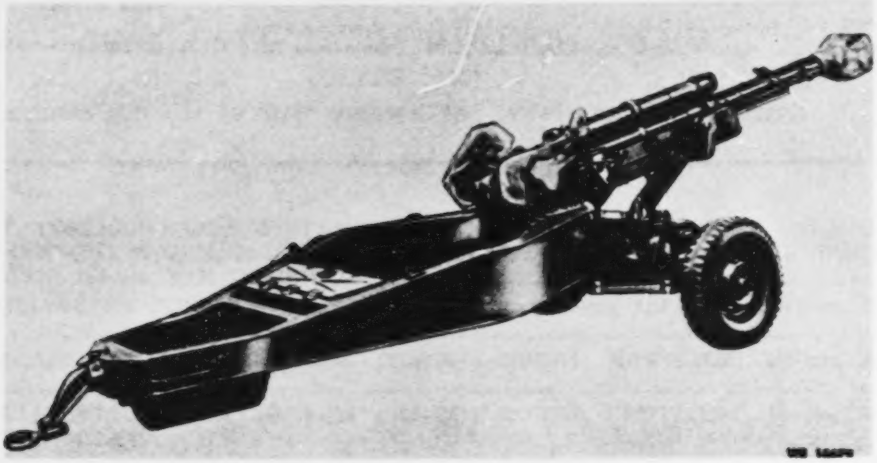
* For characteristics and data, see item in section 2.
** For characteristics and data, see item in section 23.

HOWITZER, LIGHT, TOWED: 105-MM, M102 (CANNON, 105-MM HOWITZER: M137, RECOIL MECHANISM, 105-MM HOWITZER: M37; CARRIAGE, 105-MM HOWITZER: M31)



Major item *Cannon*	 *Carriage*	 *Recoil Mechanism*	 *Line item No.*	 *Federal Stock No.*
M137	M31	M37 ...	K57392	1015-086-8164

General

HOWITZER, LIGHT, TOWED, 105-MM is a towed type, lightweight weapon having a low silhouette. The weapon is traversed and elevated by handwheels located on the sides of the carriage. A 6400-mil traverse capability is provided as the carriage pivots around the center of a circular base by means of a roller located at the rear of the trail assembly. The elevating mechanism utilizes a pair of elevating screw assemblies and is capable of an elevation range from —89 mils to +1333 mils. The weapon under normal conditions and average terrain can be returned to proper deflection within one-half turn of the handwheel after firing maximum charge at low quadrant angles of elevation. The weapon is staked in a firing position. Holes are provided in the firing base for the stakes that are provided as equipment. The weapon is capable of being airlifted. The variable length recoil used on this weapon eliminates the need for a recoil pit. This feature allows the weapon to be emplaced in a minimum amount of time. The weapon may be towed at 35 miles per hour over hard surfaced roads. A handbrake is provided on each wheel to hold the howitzer in position while it is parked. A bracket is provided on the front yoke, and two brackets are provided on the box trail to provide three points for attaching slings to hoist the howitzer.

Differences among models

Classification: Standard A.

CHARACTERISTICS

Howitzer:	
Weight	3,017.5 lb
Length	263½ in.
Width	76 in.
Height	62⅝ in.
Ground clearance	11⅛ in.
Tires:	
Suspension system:	
Size	7.00 x 16, 4 ply
Pressure:	
Transport	40 psi
Tactical	20 psi
Traversing mechanism:	
Size	16 x 24 x 10E
Pressure, operating	4–6 psi
Elevation range	—89 mils to +1,333 mils
Traverse range	6,400 mils
Maximum towing speed:	
Cross-country	10 mph
Improved roads	35 mph
Brakes	hand parking

AMMUNITION

Types	Chem, HE, HEAT, HE, AT-T, HEP, HEP-T Illum, Smoke, Dummy, and Blank.

PERFORMANCE

Rate of fire:	
Maximum (rds per min—first 3 min)	10
Sustained	3 rds per min

EQUIPMENT

Sighting and fire control *:

- COLLIMATOR, INFINITY AIMING REFERENCE: M1
- CORRECTOR, CANT: M4
- FUZE SETTER: M26
- FUZE SETTER: M27
- FUZE SETTER: M28
- FUZE SETTER SET: M63
- MOUNT, TELESCOPE: M134
- QUADRANT, FIRE CONTROL: M1A1, gunners, w/case carrying
- QUADRANT, FIRE CONTROL: M14, (Elevation)
- TELESCOPE, PANORAMIC: M113
- TELESCOPE, ELBOW: M114

INSTRUCTIONAL MATERIAL

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*For characteristics and data, see item in sections 14 and 18.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 howitzer uncrated per flatcar.

Length	**202 in.**
Width	**77 in.**
Height	**66 in.**
Volume	**594 cu ft**
Gross weight	**3,415 lb**
Ship tons	**1.707**

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

PRIME MOVER

¾-ton, 4 x 4 truck.

References: TM 9–1015–234–12, TM 9–1015–234–35.

SECTION 5

GUNS, OVER 150-MM THROUGH 200-MM

(CLASS 1025)

(Includes gun and howitzer cannons, and towed gun and howitzer.)

Page

BATTLE GROUP ATOMIC WEAPON SYSTEM: M29 (XM29) GUN, RECOILLESS, 155-MILLIMETER: M64 (XM64E2) W/GUN, 37-MILLIMETER, SPOTTING: XM77E1; MOUNT, TRIPOD, RECOILLESS GUN: 155-mm, M121 (XM121) ---- 5-2

CANNON, 155-MILLIMETER GUN: M46 (T80); MOUNT, GUN: 155-mm and 8-inch howitzer, M86 (T58) ---- 5-3

CANNON, 155-MILLIMETER HOWITZER: M45 (T186E1); MOUNT, HOWITZER: 155-mm, M80 (T167) ---- 5-5

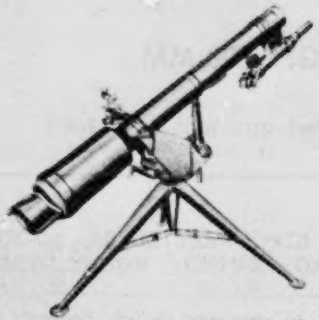
CANNON, 155-MILLIMETER HOWITZER: M126 (T255E3); MOUNT, HOWITZER: 155-mm, M127 (XM127) (See page 5-11).

CANNON, 175-MILLIMETER GUN: M113; MOUNT, GUN-HOWITZER: M158; RAMMER AND LOADER ASSEMBLY, ORD NO. 10898300; MECHANISM, FIRING, CANNON: M35 (See page 5-13).

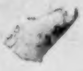
GUN, FIELD ARTILLERY, TOWED: 155-mm, M59, w/e (CANNON, 155-MILLIMETER GUN: M2 or M2A1; RECOIL MECHANISM: M3-series; CARRIAGE, 155-MILLIMETER GUN: M1) ---- 5-7

HOWITZER, MEDIUM, TOWED: 155-mm M114 and M114A1, w/e (CANNON, 155-MILLIMETER HOWITZER: M1 or M1A1; RECOIL MECHANISM: M6-series; CARRIAGE, 155-MILLIMETER HOWITZER: M1A1 or M1A2) ---- 5-9

BATTLE GROUP ATOMIC WEAPON SYSTEM: M29 (XM29) (GUN, RECOILLESS, 155-MILLIMETER: M64 (XM64E2) W/GUN, 37-MILLIMETER, SPOTTING: XM77E1; MOUNT, TRIPOD, RECOILLESS GUN: 155-MM, M121 (XM121)



SHOWN: GUN, RECOILLESS, 155 MILLIMETER, M64 W/GUN, SPOTTING, 37 MILLIMETER XM77E1, MOUNT, TRIPOD M121



SHOWN: GUN, RECOILLESS, 155 MILLIMETER M64 W/GUN, SPOTTING, 37 MILLIMETER XM77E1, CARRIAGE (PART OF MOUNT TRIPOD M121) ON TRUCK, UTILITY 1/4-TON, 4x4, M38A1D

ORD A2062

Major Item

Model	*Line item No.*	*Federal stock No.*
GUN, M64, w/e	4-17155-10	1025-690-2132
GUN, M64		1025-767-0410

General

BATTLE GROUP ATOMIC WEAPON SYSTEM: M29 (XM29) (GUN, RECOILLESS, 155-MILLIMETER: M64 (XM64E2), W/GUN, 37-MILLIMETER.SPOTTING: XM77E1; MOUNT, TRIPOD, RECOILLESS GUN: 155-mm, M121 (XM121), is a smooth bore, vehicle transported, front line infantry weapon with a nuclear capability. It can be fired from a ground mount or vehicle.

The 37-millimeter spotting gun XM77E1 is composed of 37-millimeter gun cannon XM128E1, with bracket and 37-millimeter spotting gun recoil mechanism XM36E3.

The 155-mm recoilless gun M64 (XM64E2), is an open breech, recoilless, single shot, smooth bore muzzle loaded weapon. The gun is supported on the 155-mm tripod mount M121 (XM121) by two trunnions attached to the barrel, located near the chamber portion, and a bracket that accommodates the elevating mechanism. Two lugs for mounting the telescope mount holder M6 (XM6)* are provided on the trunnion ring. The gun is not equipped with a firing mechanism; a mechanically operated firing device is provided in each propelling charge. Two handles are attached to the barrel and two to the breech end of the gun for easy handling.

The 37-millimeter spotting gun cannon XM128E1 (Component of 37-millimeter spotting gun XM77E1) is a single-shot, breech-loading, manually operated, smoothbore cannon with a vertical sliding wedge breechblock. The spotting gun is mounted coaxially under the gun M64 in a bracket secured to the muzzle end of the gun M64.

The 155-mm recoilless gun tripod mount M121 (XM121), consisting of the carriage assembly and tripod assembly, permits use of the weapon on the ground. The carriage is used to support the gun when mounted on the tripod or on TRUCK, UTILITY: ¼-ton, 4 x 4, M38A1D,** and contains elevating and traversing mechanisms, plus a clamp ring which secures the carriage to the tripod or vehicle adapter post. The tripod consists of a center post with three legs attached by means of a leg boss on the center post.

Adapter kits mounted on the ¼-ton utility truck M38A1D** and CARRIER, PERSONNEL, FULL TRACKED: armored, M113/M113A1 *** provide for the transportation of battle group atomic weapon system M29.

Differences among models

Data plate location

Gun, M64—Near the top of the trunnion bracket.
Gun, XM77E1—Stamped on the front of the mounting bracket.
Mount, tripod, M121—Right side of the carriage assembly.

Classification: Standard A (AMCTCM 279)

CHARACTERISTICS

Weapon system (tripod-mounted):

Weight	approx 365 lb
Width (emplacemen tarea)	3 meters radius
Height	6 ft., 6 in.

Gun, M64:

Weight:	
W/spotting equipment	approx 271 lb
W/o spotting equipment	217 lb
Length:	
W/spotting equipment:	
Firing position	9 ft, 6 in.
Traveling position	approx 8 ft, 6 in.
W/o spotting equipment	8 ft, 2 in.

Gun, spotting, XM77E1:

Weight (including bracket)	32½ lb
Length	3 ft, 4½ in.
Type of breech mechanism	vertical sliding wedge
Type of firing mechanism	inertia percussion

*For characteristics and data, see item in section 14.

** Characteristics and data will be included at a later date.

*** For characteristics and data, see item in section 21.

Mount, XM121:	
Tripod assembly:	
Weight	84 lb
Height	2 ft, 11⅞ in.
Length (folded	4 ft, 4⅝ in.
Carriage assembly:	
Weight	60 lb
Height	1 ft, 6½ in.
Width	1 ft, ½ in.

AMMUNITION

Gun, M64:	
Types	nuclear, practice, training dummy
Gun, XM77E1:	
Types	dummy, spotting

PERFORMANCE

Muzzle velocity	(classified)
Range	4,000 meters
Rate of fire	

EQUIPMENT

Sighting and fire control: ****
- HOLDER, TELESCOPE MOUNT: M6 (XM6).
- MOUNT, TELESCOPE: M117 (XM117).
- POST, AIMING: M1A2.
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case, carrying.
- TELESCOPE, ELBOW: M107 (XM107).
- THERMOMETER, SELF-INDICATING, BIMETALLIC: M1A1, w/e.

Auxiliary sighting and fire control:
- CASE, TELESCOPE: M121.
- CHEST, M14 (aiming post light M14).
- LIGHT, AIMING POST: M14.
- LIGHT, INSTRUMENT: M53.
- AIMING CIRCLE: M2, w/e ****.
- BINOCULAR: M13A1, w/e ****.
- BOARD, PLOTTING: M16, w/e ****.
- COMPASS, MAGNETIC, UNMOUNTED: M2, w/e ****.

Boresighting:
- CASE, BORE SIGHT: M122 (for M51 and M52 bore sights).
- SIGHT, BORE: M51.
- SIGHT, BORE: M52.

Basic Issue Items: See TM 9-1000-209-12.

INSTRUCTIONAL MATERIAL

CARTRIDGE, 87 MILLIMETER, DUMMY: XM451.

CHARGE, PROPELLING, ATOMIC PROJECTILE, DUMMY: M79 (XM79E1).

PISTON, LAUNCHING, ATOMIC PROJECTILE, DUMMY: M4 (XM4).

PROJECTILE, ATOMIC, SUPERCALIBER, 279-MILLIMETER, DUMMY: M421 (XM421).

STORAGE AND SHIPMENT DATA

Within and Outside Continental United States

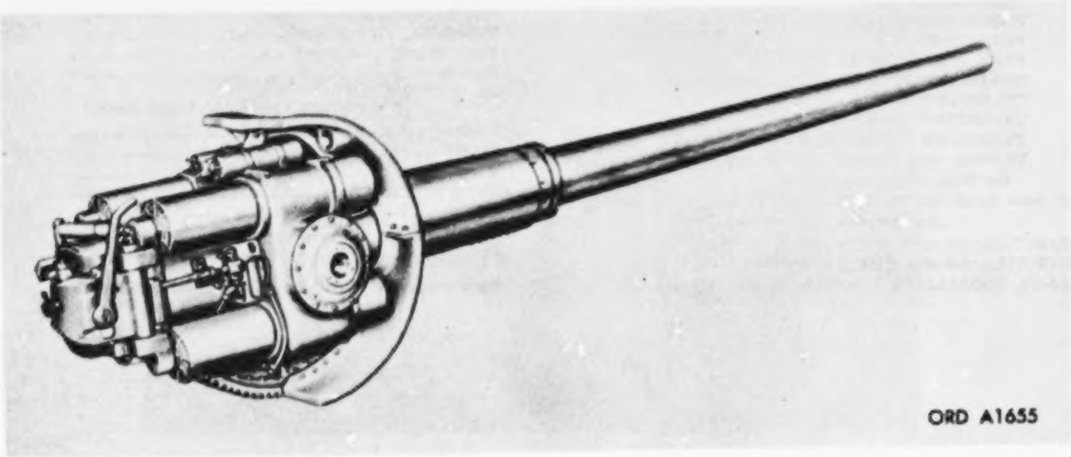
Shipped one weapon system in two wooden boxes.

Length:	
Box 1	4 ft, 11 in.
Box 2	8 ft, 9¼ in.
Width:	
Box 1	1 ft, 7⅝ in.
Box 2	2 ft, 7 in.
Height:	
Box 1	1 ft, 2⅝ in.
Box 2	1 ft, 9 in.
Volume:	
Box 1	9.9 cu ft
Box 2	39.8 cu ft
Gross weight (box 1 plus box 2)	690 lb
Ship tons:	
Box 1	0.248
Box 2	0.995

References: TM 9-1000-209-12, TM 9-1100-209-14(C), TM9-1000-209-20P, TM 9-1000-209-35, TM 9-1000-209-35P.

**** For characteristics and data, see item in sections 14, 18, and 28.

CANNON, 155-MILLIMETER GUN: M46 (T80); MOUNT, GUN: 155-MM AND 8-INCH HOWITZER, M86 (T58)


ORD A1655

Model *Cannon*	*Model* *Mount*	*Secondary item* *Line item No.*	*Secondary item* *Federal stock No.*
M46 (T80)			1025–723–8947
	M86 (T58)		1025–739–8889

General

The CANNON, 155-MILLIMETER GUN: M46 (T80) with MOUNT, GUN: 155-MILLIMETER and 8-INCH HOWITZER, M86 (T58), provides the major armament for the GUN, SELF-PROPELLED, FULL TRACKED: 155-mm, M53 (T97).

The 155-mm gun cannon consists principally of a firing lock, breech lock counterbalance assembly, breech mechanism group, and gun tube and breech ring group. The cannon tube is supported and alined in the mount by means of a finish-machined bearing surfaces on the rear half of the tube. The breech mechanism is hinged at the right side of the breech ring body to swing laterally when the breech is opened. A breechblock counterbalance assembly is connected between the top of the breech ring body and the carrier hinge pin, to offset the weight of the breechblock and carrier during breech opening and closing operations. The firing lock is mounted in the breech mechanism.

The 155-mm and 8-inch howitzer mount M86 includes the recoil mechanism, recoil mechanism replenisher assemblies, and cradle group. The cradle provides a central bore in which the gun tube slides during recoil and counterrecoil. The tube is secured against rotation within the cradle by means of the cradle torque key located at the lower front of the cradle.

Differences among models

Data plate location

The combined gun and mount identification plate is located on the upper left recoil cradle ring.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Cannon and mount:	
Overall:	
Length	24 ft, 3⅝ in.
Width	8 ft, 10¼ in.
Height	4 ft, 1 in.
Cannon:	
Weight (complete)	7,168 lb
Weight of tube	5,825 lb
Length of cannon (muzzle to rear face of firing lock hammer)	24 ft, 3⅝ in.
Length of tube	
Rifling:	
Length	19 ft, 2½ in.
Number of grooves	48
Twist, hight-hand	one turn in 25 calibers
Type of breechblock	stepped-thread, interrupted-screw, horizontal-swing.
Type of firing mechanism	percussion inertia
Estimated accuracy life of tube	1,800 rd
Mount:	
Weight	4,800 lb
Type of recoil mechanism	hydrospring
Number of recoil cylinders	4
Length of recoil:	
Normal	
Maximum	
Capacity of recoil mechanism (including replenisher assembly)	25 gal
Elevation (max)	65°
Depression (max)	—5°
Traverse (right or left)	30°
Operation of firing linkage	manual

AMMUNITION

Types	HE, CHEM, separate loading, SMOKE, and ILLUM
Type of charge	base and increment
Propelling charge	M19

PERFORMANCE

Muzzle velocity (shell, HE, max zone charge)	2,800 fps
Range (max)	25,715 yd
Rate of fire	

EQUIPMENT

Sighting and fire control:*

Installed on self-propelled vehicle M53 prior to issue:

INDICATOR, AZIMUTH, MECHANICAL: T27

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* For characteristics and data, see item in sections 14, 18, 27, and 28.

MOUNT, TELESCOPE: M99A1C
MOUNT, TELESCOPE: M101

Boxed and stowed on self-propelled vehicle M53 prior to issue:

FUZE SETTER: M26 or M27
FUZE SETTER: M28 or M14
PERISCOPE: M15
PERISCOPE: M15A1
PERISCOPE: M17
POST, AIMING: M1A2
QUADRANT, FIRE CONTROL: M1A1 or M1, w/case
TELESCOPE: M99
TELESCOPE: M99C
TELESCOPE, PANORAMIC: M100
TRIPOD, SURVEYING: (FSN 6675-240-1881) (issued by the Corps of Engineers).

Basic Issue Items: See TM 9-2350-210-12.

INSTRUCTIONAL MATERIAL

PROJECTILE, 155-MILLIMETER, EMPTY: M101
PROJECTILE, 155-MILLIMETER, DUMMY: M7
CHARGE, PROPELLING, 155-MILLIMETER: M100

STORAGE AND SHIPMENT DATA

Within Continental United States

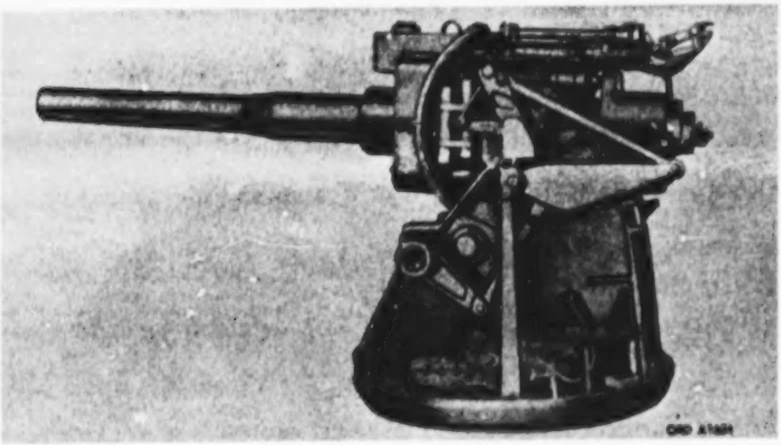
Number per crate --
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Number per crate --
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL D-40, TM 9-2350-210-12, TM 9-8025.

CANNON, 155-MILLIMETER HOWITZER: M45 (T186E1); MOUNT, HOWITZER: 155-MM, M80 (T167)



Model		*Secondary item Line item No.*	*Federal stock No.*
Cannon	*Mount*		
M45			1025-730-7842
	M80		1025-888-5015

General

The CANNON, 155-MILLIMETER HOWITZER: M45 (T186E1) with MOUNT, HOWITZER: 155-mm, M80 (T167), provides the major armament for the HOWITZER, SELF-PROPELLED, FULL-TRACKED: 155-mm, M44 (T194) or M44A1.

The cannon is composed pricipally of the cannon tube, breech ring group, breech mechanism assembly, counterbalance assembly, and firing mechanism M34. The cannon is mounted through the central bore of the howitzer mount cradle which forms the slide for the howitzer tube during recoil and counterrecoil. A howitzer cradle torque key engages a keyway in the cannon tube and prevents rotation of the cannon tube.

The mount consists principally of a howitzer mount rammer assembly, four recoil cylinder assemblies, two recoil mechanism replenisher assemblies, and the following group of parts: structure, cradle shield, equilibrator, and elevating mechanism.

Differences among models

Data plate location

The howitzer model and serial numbers are stamped on the lower rear face of the breech ring.

The mount nameplate is located on the left side of the mount directly below the rammer.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Cannon:	
Weight (complete)	2,970 lb
Weight of tube	2,140 lb
Length	13 ft, ⅝ in.
Length of tube	11 ft, 9⅝ in.
Rifling:	
Length	
Number of grooves	48
Twist, right-hand	one turn in 25 calibers
Type of breechblock	interrupted stepped thread
Type of firing mechanism	percussion
Estimated accuracy life of tube	
Mount:	
Weight	10,940 lb
Type of recoil mechanism	hydrospring
Number of recoil cylinders	4
Length of recoil:	
Normal	1 ft, 7¼ in.
Maximum	1 ft, 7⅝ in.
Capacity of recoil mechanism (includes replenisher)	17 gal
Elevation (max)	65°
Depression (max)	5°
Traverse, maximum, Right or Left	30°
Operation of firing linkage	manual or electrical

AMMUNITION

Types	Separate-loading-CHEM, HE, ILLUM, SMOKE, and BE SMOKE.

PERFORMANCE

Muzzle velocity (max):	
M3 charge	1,220 fps
M4A1 charge	1.850 fps
Range (HE) (max):	
M3 charge	9,700 meters
M4A1 charge	14,600 meters
Rate of fire	

EQUIPMENT

Sighting and fire control:*
- Installed on vehicle prior to issue.
  - MOUNT, TELESCOPE: M95 (T190)
  - MOUNT, TELESCOPE: M96 (T189)
- Boxed and stowed on vehicle prior to issue:
  - FUZE SETTER: M26 or M27 or M22
  - FUZE SETTER: M28
  - FUZE SETTER: M28 or M14
  - POST, AIMING: M1A2
  - QUADRANT, FIRE CONTROL: M1A1, w/case
    or
  - QUADRANT, FIRE CONTROL: M1, w/case
  - TELESCOPE, PANORAMIC: M12A7E4

* For characteristics and data, see item in sections 14, 18, and 28.

TELESCOPE: M93 (T153)
TRIPOD, SURVEYING: FSN 6675-240-1881 (issued by Corps of Engineers).
Basic Issue Items: See TM 9-7004, C2.

INSTRUCTIONAL MATERIAL

PROJECTILE, 155-MILLIMETER DUMMY: M7
BAND, DUMMY PROJECTILE: front and rear
CHARGE, PROPELLING, 155-MILLIMETER DUMMY: M2
PROJECTILE, 155-MILLIMETER DUMMY: MK1

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

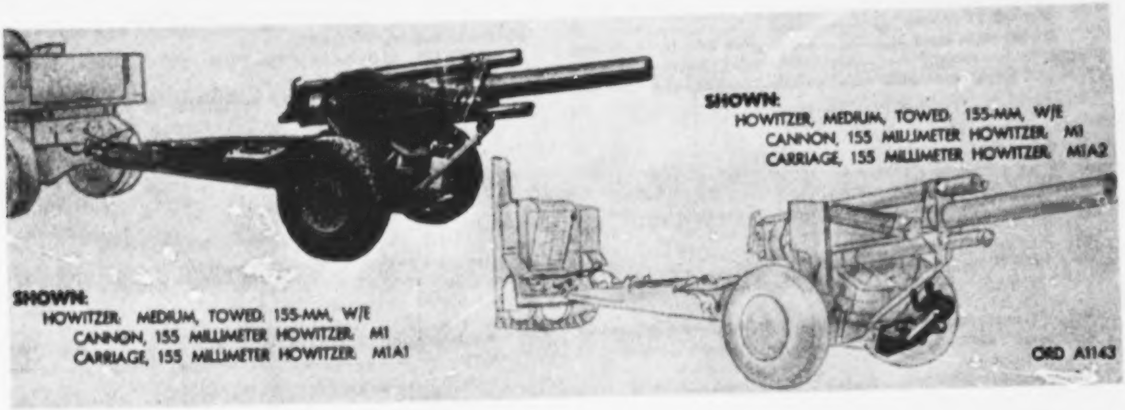
Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

References: SNL D-50, SNL D-63, TM 9-7004, TM 9-1025-203-34, TM 9-2005.

Pages 5-7 and 5-8 are rescinded by C 3 .

HOWITZER, MEDIUM, TOWED: 155-MM, M114 AND M114A1, W/E (CANNON 155-MILLIMETER HOWITZER: M1 OR M1A1; RECOIL MECHANISM: M6–SERIES; CARRIAGE, 155-MILLIMETER HOWITZER: M1A1 OR M1A2)



SHOWN:
HOWITZER, MEDIUM, TOWED: 155-MM, W/E
CANNON, 155 MILLIMETER HOWITZER: M1
CARRIAGE, 155 MILLIMETER HOWITZER: M1A2

SHOWN:
HOWITZER, MEDIUM, TOWED: 155-MM, W/E
CANNON, 155 MILLIMETER HOWITZER: M1
CARRIAGE, 155 MILLIMETER HOWITZER: M1A1

ORD A1143

Major item				
Model			*Line item No.*	*Federal stock No.*
Cannon	*Carriage*	*Recoil mechanism*		
	M114			
M1 or M1A1	M1A1	M6 or M6A1 or M6A2 or M6B1 or M6B2		1025-322-9755
	M114A1			
M1 or M1A1	M1A2	M6 or M6A1 or M6A2 or M6B1 or M6B2		1025-322-9768

General

The HOWITZER, MEDIUM, TOWED: 155-mm, M114 or M114A1, w/e, consisting of CANNON, 155-MILLIMETER HOWITZER: M1 or M1A1; RECOIL MECHANISM: M6–SERIES; CARRIAGE, 155-MILLIMETER HOWITZER: M1A1 or M1A2, is a medium field artillery weapon.

The howitzer cannon consists of the breech ring, the breechblock, breech mechanism, and tube. It uses separate loading ammunition and is fired by a cartridge primer and firing mechanism attached to the breechblock. The external surface of the cannon is machined to form a bearing surface which slides in the recoil mechanism cradle and cylinder yoke during recoil and counterrecoil.

The carriage M1A1 or M1A2 consists of top and bottom carriages, the wheels and brake mechanism, the trails, equilibrators, and firing jack. The carriages are of the unsprung, 2-wheel, split-trail type. The wheels are equipped with large combat tires and are supported on antifriction bearings for high-speed transport. The muzzle-heavy weapon is balanced by spring-type equilibrators to facilitate maneuvering the howitzer in elevation. The carriages are equipped with airbrakes which are operated from the prime mover. Handbrakes on each wheel are provided for parking. The recoil mechanism, the elevating and traversing mechanism, the right and left shields, the telescope mounts, and panoramic telescope are attached to the top carriage. The bottom carriage supports the weight of the top carriage and cannon, and transmits firing stresses to the firing jack and the trails.

The recoil mechanism consists of the recoil and counterrecoil systems. The counterrecoil system consists of the recuperator cylinder (employing a floating piston to separate the oil from the compressed nitrogen), the counterrecoil cylinders, and the counterrecoil and recuperator cylinder head stuffing box which joins the two cylinders hydraulically. The recoil system consists of the recoil cylinder, replenisher, and variable recoil cam assembly. The recoil and counterrecoil systems are not connected by oil passages. Both systems are installed in the cylinder yoke and cradle which support the cannon and in which the cannon slides during recoil and counterrecoil.

Differences among models

The cannon M1A1 uses steels with increased physical properties.

The carriage M1A1 is equipped with a rack and pinion-type firing jack, while the carriage M1A2 is equipped with a screw-type firing jack. The traveling lock of the M1A2 is equipped with a firing jack hanger while the traveling lock of the M1A1 is not so equipped.

The differences between the recoil mechanisms are not apparent to the using arm. They function and are serviced in the same manner. The differences between the recoil mechanisms pertain to the floating piston and suitability for use in extreme climatic conditions. Recoil mechanisms M6, M6B1, and M6B2 will perform satisfactorily in temperatures down to −20°F. If lower temperatures are anticipated and the carriage is not equipped with either recoil mechanism M6A1 or M6A2, the Ordnance maintenance personnel are to be notified.

Classification

Cannon M1 or M1A1:	
W/carriage M1A1	Standard B (OTCM 37119)
W/carriage M1A2	Standard A (OTCM 36841)

CHARACTERISTICS

Cannon and mount:	
Overall:	
Length	24 ft
Width	8 ft
Height	5 ft, 11 in.

Cannon:	
Weight	3,825 lb
Weight of tube	2,995 lb
Length (muzzle to rear end of breech mechanism)	12 ft, $5\frac{3}{16}$ in.
Length of tube	11 ft, $10\frac{51}{64}$ in.
Rifling:	
Length	113 ft, $\frac{1}{8}$ in.
Number of grooves	48
Twist, right-hand	One turn in 25 calibers
Type of breechblock	stepped-thread, interrupted-screw
Type of firing mechanism	percussion hammer
Estimated accuracy life of tube	15,000 rd
Carriage:	
Weight (approx)	8,875 lb
Elevation (max)	63°
Depression (max)	—2°
Operation of firing linkage	manual
Traverse	R 25°, L 24°
Tire size and type	14:00 x 20 combat
Tire pressure	55 lb
Type of brakes	air service, mechanical parking brakes
Recoil mechanism:	
Type of recoil mechanism	hydropneumatic
Number of recoil cylinders	3
Length of recoil:	
Maximum elevation	3 ft, 5 in.
Minimum elevation	5 ft
Capacity of recoil mechanism	6 gal

AMMUNITION

Types	HE, CHEM, ILLUM, SMOKE and SMOKE (BE), separate loading.
Type of charge	base and increment

Flash reducer M2 is used with propelling charge M4 or M4A1 to reduce muzzle flash when firing at night.

PERFORMANCE

Muzzle velocity:	
HE, CHEM, SMOKE BE (Chg 7)	1,850 fps
SMOKE BE (colored) (Chg 7)	1,902 fps
ILLUM (Chg 5 only)	1,160 fps
Range (max):	
HE, CHEM (Chg 7)	16,355 yd
SMOKE BE (HC) (Chg 7) (limited by 25 sec fuse)	9,700 yd
SMOKE BE (colored) (Chg 7) (limited by 25 sec fuse)	9,700 yd
ILLUM (Chg 5 only) (limited by 25 sec fuse)	7,100 yd
(limited by 25 sec fuse)	9,000 yd
Rate of fire:	
First ½ min	2 rd
First 4 min	8 rd
First 10 min	16 rd
Prolonged fire	40 rd per hr

EQUIPMENT

Sighting and fire control:*

On-carriage:

- MOUNT, TELESCOPE: M25
- TELESCOPE, PANORAMIC: M12A7C

Off-carriage:

- FUZE SETTER: M26 or M27
- FUZE SETTER: M28
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: M1A1, w/case
- THERMOMETER, SELF-INDICATING, BIMETALLIC: M1, w/e.
- WATCH, WRIST: (all services)

Basic Issue Items: See TM 9-331A,C2.

INSTRUCTIONAL MATERIAL

SUBCALIBER EQUIPMENT:

- CANNON, 37-MILLIMETER GUN, SUBCALIBER: M1916 on MOUNT GUN:
  - subcaliber, 37-mm, M10, w/RECOIL MECHANISM: 37-mm gun M1916, w/e.
- PROJECTILE, 155-MILLIMETER, DUMMY: Mk1
- PROJECTILE, 155-MILLIMETER, DUMMY: M7 and M7B1
- CHARGE, PROPELLING, 155-MILLIMETER, DUMMY: M2

SHIPMENT AND STORAGE DATA

Within Continental United States

Howitzer and carriage (KD) w/equipment:	
Number per crate (fully sheathed skid-type crate)	1
Length	17 ft
Width	8 ft, $1\frac{1}{2}$ in.
Height	6 ft, $\frac{1}{2}$ in.
Volume	844.5 cu ft
Gross weight	17,460 lb
Ship tons	21.11
Howitzer M1 only:	
Number per crate (double-end style)	1
Length	13 ft, $8\frac{1}{2}$ in.
Width	1 ft, $10\frac{3}{8}$ in.
Height	2 ft, $6\frac{7}{8}$ in.
Volume	66.9 cu ft
Gross weight	4,115 lb
Ship tons	1.67

Outside Continental United States

Howitzer and carriage (KD) w/equipment:	
Number per crate (fully sheathed skid-type crate)	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Howitzer M1 only:	
Number per crate (double-end style)	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

PRIME MOVER

4-ton, 6 x 6, cargo truck or 18-ton high-speed tractor M5

TIME TO EMPLACE

5 min

References: TM 9-331A, SNL C-39, TM 9-1025-200-20P

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* For characteristics and data, see item in sections 14, 18, 26, and 29.

HOWITZER, MEDIUM, TOWED: AUXILIARY PROPELLED, 155-MM, M123A1, W/E (CANNON, 155-MILLIMETER HOWITZER: M1 OR M1A1; RECOIL MECHANISM: M6-SERIES: CARRIAGE, 155-MILLIMETER HOWITZER: M32)

Model	*Major item Line item No.*	*Federal stock No.*
M123A1	K57940	1025-994-8931

General

HOWITZER, MEDIUM, TOWED: AUXILIARY PROPELLED, 155-MM, M123A1, W/EQUIPMENT, is a medium field artillery weapon consisting of CANNON, 155-MILLIMETER HOWITZER: M1 or M1A1; RECOIL MECHANISM: M6, M6A2 or M6B1: CARRIAGE, 155-MILLIMETER HOWITZER: M32; a hydraulic power unit driven by a 20 horsepower gasoline engine; two-wheel drive units connected to the power unit by four hydraulic lines which drive the carriage wheels; a removable caster assembly to support the trails when maneuvering the weapon; and a mechanical jack for raising and lowering the trails as needed. This propulsion system provides more efficient maneuverability and accurate positioning of the weapon by the driver.

Differences among models

Classification: Standard A.

CHARACTERISTICS

Cannon and carriage:	
Overall:	
Length	24 ft
Width (traveling position) (outside wheel drive unit)	110 in.
Height (traveling position)	76½ in.
Cannon:	
Weight:	
M1	3,825 lb
M1A1	3,750 lb
Weight of tube:	
M1	2,995 lb
M1A1	2,920 lb
Length (muzzle to rear end of breech mechanism)	12 ft, 5-3/16 in.
Length of tube	11 ft, 10 51/64 in.
Rifling:	
Length	113.10 in.
Number of grooves	48
Twist, right-hand	one turn in 25 calibers
Type of breechblock	stepped thread, interrupted-screw
Type of firing mechanism	percussion hammer
Estimated accuracy life of tube:	
M1	3,000 rds
M1A1	15,000 rds
Carriage:	
Weight	8,208 lb
Elevation	63 deg
Depression	—2 deg
Operation of firing linkage	manual
Carriage:	
Traverse	R 25 deg, L 24 deg
Tire size and type	carriage, 14.00 x 20, earth mover caster, 6.00 x 9, regular nonskid thread.
Tire pressure:	
Carriage tires	50 lb
Caster tire	35 lb
Type of brakes	air service, mechanical parking brakes
Recoil mechanism:	
Type of recoil mechanism	hydropneumatic
Number of recoil cylinders	3
Length of recoil:	
Maximum elevation	3 ft, 5 in.
Minimum elevation	5 ft
Capacity of recoil mechanism	6 gal
Engine:	
Manufacturer	Continental Motors Corp.
Model	4A084-1
Type	gasoline, overhead valve, 4-cycle
Cylinders	4, air-cooled
Displacement	84 cu in.

AMMUNITION

Types	HE, CHEM, ILLUM, SMOKE
Type of charge	separate loading base and increment
Flash reducer	M2

PERFORMANCE

Muzzle velocity	1,850 fps
Range (max) (with full charge)	16,335 yd
Rate of fire:	
Rapid bursts	3 rds per min
Prolonged firing	1 rd per min

EQUIPMENT

Sighting and fire control: *

On-carriage:

- MOUNT TELESCOPE: M25 (7578429) (remains intact on end item)
- TABLE, FIRING: FT 155–Q–3
- TELESCOPE, PANORAMIC: M12A7C (7657260)

Off-carriage:

- FUZE, SETTER: M26 and M28 (T46)
- LIGHT, AIMING POST: M14
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: M1A2, w/case
- THERMOMETER, SELF-INDICATING, BIMETALLIC: M1, w/equipment
- WATCH, WRIST: (all services)

Basic Issue Items: See TM 9–1025–200–12.

INSTRUCTIONAL MATERIAL

Subcaliber equipment:

GUN, SUBCALIBER, 37-MM: CANNON, M1916, on MOUNT, M13A1, w/RECOIL MECHANISM, M1916, w/EQUIPMENT.

SHIPMENT AND STORAGE DATA

Within Continental United States

Shipped 1 howitzer uncrated.

Length	286 in.
Width	96 in.
Height	90 in.
Volume	1440 cu ft
Gross weight	13,500 lb
Ship tons	6.75

Outside Continental United States

Shipped 1 howitzer uncrated.

Length	286 in.
Width	96 in.
Height	90 in.
Volume	1,440 cu ft
Gross weight	13,500 lb
Ship tons	6.75

PRIME MOVER

5-ton, 6 x 6 cargo truck.

TIME TO EMPLACE

References: TM 9–1025–200–12, TM 9–1025–200–20P, TM 9–1025–200–35, TM 9–1025–200–35P.

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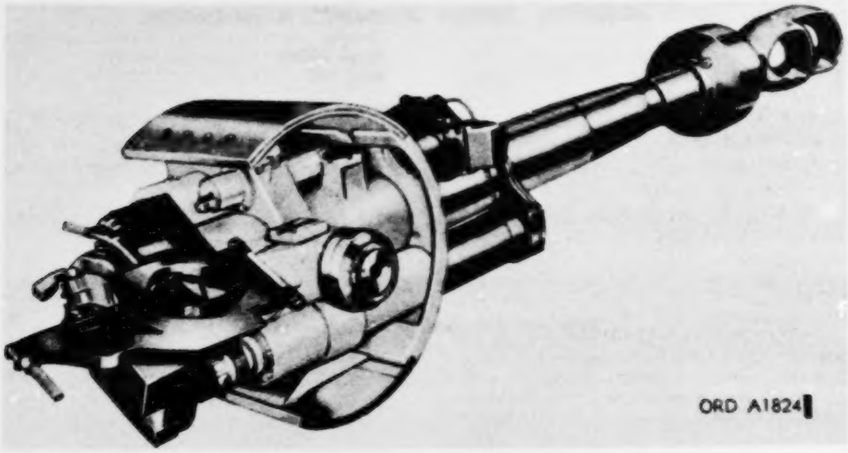
*For characteristics and data, see item in sections 14, 18, 26, and 28.

CANNON, 155 MILLIMETER HOWITZER: T255E3; MOUNT, HOWITZER: 155-MM, XM127



Secondary item

Model		*Line item No.*	*Federal stock No.*
Cannon	*Mount*		
T255E3	XM127		

General

CANNON, 155 MILLIMETER HOWITZER: T255E3 with MOUNT, HOWITZER: 155-mm, XM127, provides the primary armament for HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, T196E1.*

The breech mechanism is a semiautomatic screw block type, designed for separate-loading ammunition. Breech opening is accomplished by utilizing the energy of counterrecoil and closing by a laminated torsion spring. Firing is accomplished by MECHANISM, FIRING, CANNON: M35, which uses cartridge-type primers fired by a continuous pull percussion mechanism.

The mount consists of a cradle assembly that mounts the hydraulic variable recoil mechanism, cradle cam, equilibrator arm, recuperator, replenisher, buffer, upper and lower rotors, bump stops, and dust shield. Pads and brackets are provided for mounting the fire-control equipment.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Cannon:	
Weight	3,130 lb
Length:	
Overall	181.01 in.
Tube	143 in.
Rifling:	
Length	115.82 in.
Number of grooves	48
Twist, hand	one turn in 20 calibers
Type of breechblock	Welin-step thread
Type of firing mechanism	percussion manual
Estimated accuracy life of tube	15,000 rd (EFC)
Mount:	
Weight (w/oil)	3,130 lb
Type of recoil mechanism	hydropneumatic
Number of recoil cylinders	2
Length of recoil:	
Normal	high elevation 24 in.
Maximum	low elevation 36 in.
Capacity of recoil mechanism	6 gal
Elevation	+75 deg
Depression	−5 deg
Traverse (left or right)	360 deg

AMMUNITION

Types	gas, HE, illum, smoke (colored and WP), dummy

PERFORMANCE

Muzzle velocity	1,850 fps
Range	16,500 yd
Rate of fire:	
Normal	1 rd per min
Rapid	3 rds per min

EQUIPMENT

Sighting and fire control:**
- BINOCULAR: M17A1
- FUZE SETTER: M26, w/CASE, CARRYING, M66
- FUZE SETTER: M27 or M14
- MOUNT, TELESCOPE: T206
- MOUNT, TELESCOPE: T208
- PERISCOPE, TANK: M27
- PERISCOPE, TANK: XM42
- PERISCOPE, TANK: XM45
- QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/CASE, CARRYING: M82
- REFLECTOR, AIMING POST: clear, M1 and red, M2, w/CASE, CARRYING, M144
- TELESCOPE, ELBOW: T176E2
- TELESCOPE, PANORAMIC: T177

Basic Issue Items: See TM 9-2350-217-10

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see items in section 23.

** For characteristics and data, see items in sections 14, 18, and 27.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: **TM 9-2350-217-10**

CANNON, 175 MILLIMETER GUN: M113 (T256E3); MOUNT, GUN-HOWITZER: M158; RAMMER AND LOADER ASSEMBLY, ORD NO. 10898300; MECHANISM, FIRING, CANNON: M35

(Illustration will be added at a later date)

Secondary Item

Model			*Line item No.*	*Federal stock No.*
Cannon	*Mount*	*Firing mechanism*		
M113 (T256E3)				1025-735-4329
	M158			1025-863-5613
		M35		1025-895-9182

General

CANNON, 175 MILLIMETER GUN: M113 (T256E3) with MOUNT, GUN-HOWITZER: M158, RAMMER AND LOADER ASSEMBLY, ORD No. 10898300, and MECHANISM, FIRING, CANNON: M35, provides the armament for GUN, FIELD ARTILLERY, SELF-PROPELLED: 175-mm, M107 (T235E1).*

The cannon M113 consists of a tube assembly screwed into an internal thread in a breech ring and locked in place by a key and a screw. The tube assembly is of monobloc (one-piece) construction. The chamber and bore are chrome-plated. Longitudinal rails secured to three hoops shrunk onto the jacket maintain the alinement of the cannon in the mount. The breech consists of an outer breech ring containing internal threads into which the tube is threaded.

The gun-howitzer mount M158 includes the recoil mechanism of the hydropneumatic variable recoil type, which controls the forces created by firing and checks the movement of the recoiling parts gradually, to avoid displacement of the vehicle, and also returns the recoiling parts into their original position. The major components are the recoil, counterrecoil, and recuperator cylinders, contained in the gun cradle and the replenisher cylinder.

The rammer and loader assembly operates to lift a projectile from the rear or left side of the vehicle, position it for ramming, and ram it into the cannon chamber. Hydraulic power for operation is obtained from the vehicle hydraulic system. Operation can also be accomplished manually by means of handcranks.

The firing mechanism is a percussion type and is operated manually by a lanyard.

Differences among models

Data plate location

Classification: Standard A (OTCM 37597)

CHARACTERISTICS

Cannon:	
Weight:	
Cannon complete	13,800 lb
Barrel assembly	12,050 lb
Breech mechanism	1,750 lb
Tipping parts	18,300 lb
Length:	
Tube	413 in.
Cannon	35 ft, 8 in.
Rifling:	
Length	349.16 in.
Number of grooves	48
Bore:	
In calibers	60
Diameter	175-mm
Breechblock	Welin-step thread
Firing mechanism:	
Type	percussion
Operation	manual, by lanyard
Mount:	
Weight	4,500 lb
Recoil mechanism:	
Weight	3,925 lb
Type	hydropneumatic
Number of recoil cylinders	1
Length of recoil:	
Normal	high elevation—28-30 in.
Maximum	low elevation—68 to 70 in.
Equilibrator	pneumatic
Type of recoil oil	FSN 9150-255-4443 (OHC)

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* For characteristics and data, see item in section 23.

Oil capacity	15 gal
Oil reserve:	
Replenisher	2 pt
Recuperator	2 pt
Elevation (max)	65 deg
Depression	0 deg
Turret traverse (right or left)	30 deg
Traversing and elevating operation	manual or hydraulic

AMMUNITION

Type	HE
Loading	separate

PERFORMANCE

Muzzle velocity	3,000 fps
Range (maximum)	32,800 meters
Allowable recoil (variable)	
Rate of fire:	
Normal	1 rd per 2 min
Maximum	1 rd per min
Maximum number of rounds fired consecutively at max rate	
Maximum powder pressure permitted	50,000 psi
Average accuracy life	400 rd (EFC)

EQUIPMENT

Sighting and fire control*
- Installed on self-propelled gun M107 prior to issue:
  - MOUNT, TELESCOPE: direct fire, M138
  - MOUNT, TELESCOPE: panoramic, M137 (T186E3)
- Boxed and stowed on self-propelled gun M107 prior to issue:
  - BINOCULAR: M17A1
  - FUZE SETTER: M26 and M27
  - LIGHT, INSTRUMENT: M52
  - PERISCOPE, TANK: M17
  - POST, AIMING: M1A2
  - QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
  - QUADRANT, FIRE CONTROL: gunner's, M1A1
  - REFLECTOR, AIMING POST: clear, M1
  - REFLECTOR, AIMING POST: red, M2
  - SCALE, GRAPHICAL FIRING:
  - SCALE, GRAPHICAL FIRING: site
  - TELESCOPE, ELBOW: direct fire, M116C
  - TELESCOPE, PANORAMIC: M115 (T146)

Basic Issue Items: See TM 9-2300-216-10

INSTRUCTIONAL MATERIAL

PROJECTILE, 175 MILLIMETER, DUMMY:
CHARGE, PROPELLING, 175 MILLIMETER, DUMMY:
PRIMER, PERCUSSION INERT:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 gun cannon	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 gun cannon	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-2300-216-10, TM 9-1000-218-35, TM 9-1000-218-35P

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* For characteristics and data, see item in sections 12, 14, 18, and 27.

SECTION 6

GUNS, OVER 200-MM THROUGH 300-MM

(CLASS 1030)

(Includes howitzer cannon, towed howitzer, and motorized gun.)

Page

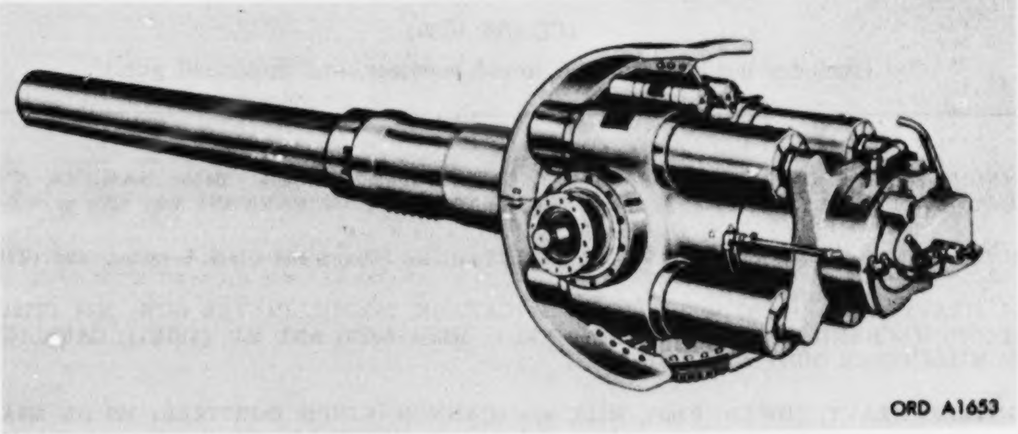
CANNON, 8-INCH HOWITZER: M2A1E1; MOUNT, GUN-HOWITZER: M158; RAMMER AND LOADER ASSEMBLY, ORD No. 10898300; MECHANISM, FIRING, CANNON: M35 (See page 6-9)

CANNON, 8-INCH HOWITZER: M47 (T89); MOUNT, GUN: 155-mm and 8-inch howitzer, M86 (T53) 6-2

GUN, HEAVY, MOTORIZED; 280-mm, M65, w/e (CANNON, 280 MILLIMETER GUN: M66 (T131); RECOIL MECHANISM: M32 (T80E3) AND T81 or M32 (T80E3) AND M33 (T81E1); CARRIAGE, 280 MILLIMETER GUN: M30 (T72) 6-4

HOWITZER, HEAVY, TOWED: 8-inch, M115, w/e (CANNON, 8-INCH HOWITZER: M2 OR M2A1; RECOIL MECHANISMS: M4-series; CARRIAGE, 8-INCH HOWITZER: M1) 6-6

CANNON, 8-INCH HOWITZER: M47 (T89); MOUNT, GUN: 155-MM AND 8-INCH HOWITZER, M86 (T58)



ORD A1653

Secondary item

Model		*Line item No.*	*Federal stock No.*
Cannon	*Mount*		
M47 (T89)			1030-723-8950
	M86 (T58)		1025-739-3839

General

The CANNON, 8-INCH HOWITZER: M47 (T89) with MOUNT, GUN: 155-MM and 8-inch howitzer, M86 (T58), provides the major armament for the HOWITZER, SELF-PROPELLED, FULL TRACKED: 8-inch, M55 (T108).

The 8-inch howitzer cannon M47 consists principally of a firing lock, breechblock counterbalance assembly, breech mechanism group, and gun tube and breech ring group. The gun is supported and alined in the mount by means of finish-machined bearing surfaces on the rear half of the tube. The breech mechanism is hinged at the right side of the breech ring body to swing laterally when the breech is opened. A breechblock counterbalance assembly is connected between the top of the breech ring body and the carrier hinge pin, to offset the weight of the breechblock and carrier during breech opening and closing operations. The firing lock is mounted in the breech mechanism.

The 155-mm and 8-inch howitzer gun mount M86 (T58) includes the recoil mechanism, recoil mechanism replenisher assemblies, and cradle group. The cradle provides a central bore in which the cannon tube slides during recoil and counterrecoil. The tube is secured against rotation within the cradle by means of the cradle torque key located at the lower front of the cradle.

Differences among models

Data plate location

The combined gun and mount identification plate is located on the upper left recoil cradle ring.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Cannon:
- Weight .... 6,120 lb
- Weight of tube .... 4,777 lb
- Length (muzzle to rear face of firing lock hammer) .. 18 ft, ⅝ in.
- Length of tube ....
- Rifling:
  - Length .... 13 ft, 8⅝ in.
  - Number of grooves 48
  - Twist, right-hand .... one turn in 25 calibers
- Type of breechblock .... stepped thread, interrupted-screw, horizontal-swing.
- Type of firing mechanism .... percussion inertia
- Estimated accuracy life of tube .... 6,000 rd

Mount:
- Weight .... 4,800 lb
- Type of recoil mechanism .... hydrospring
- Number of recoil cylinders 4
- Length of recoil:
  - Normal ....
  - Maximum ....
- Capacity of recoil mechanism .... 25 gal
- Elevation (max) .... 65°
- Depression (max) .... −5°
- Operation of firing linkage .... manual

AMMUNITION

Type .... HE, separate loading
Type of charge .... base and increment

PERFORMANCE

Muzzle velocity .... 1,950 fps
Range .... 18,510 yd
Rate of fire ....

EQUIPMENT

Sighting and fire control:*
- Installed on self-propelled vehicle M55 prior to issue:
  - INDICATOR, AZIMUTH, MECHANICAL: T27
  - MOUNT, TELESCOPE: M99A1C (T179E5)
  - MOUNT, TELESCOPE: M101 (T181)

* For characteristics and data, see item in sections 14, 18, 27, and 28.

Boxed and stowed on self-propelled vehicle, M55 prior to issue:
- FUZE SETTER: M26 or M27
- FUZE SETTER: M28 or M14
- PERISCOPE: M13
- PERISCOPE: M15A1
- PERISCOPE: M17
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: M1A1, W/CASE
  or
- QUADRANT, FIRE CONTROL: M1, W/CASE
- TELESCOPE: M99C (T159E1)
- TELESCOPE, PANORAMIC: M100 (T149E1)
- TRIPOD, SURVEYING: FSN 6675-240-1881 (issued by Corps of Engineers).

Basic Issue Items: See TM 9-2350-210-12.

INSTRUCTIONAL MATERIAL

CHARGE PROPELLING, 8-INCH DUMMY: M4
PROJECTILE, 8-INCH DUMMY: M14

STORAGE AND SHIPMENT DATA

Within Continental United States

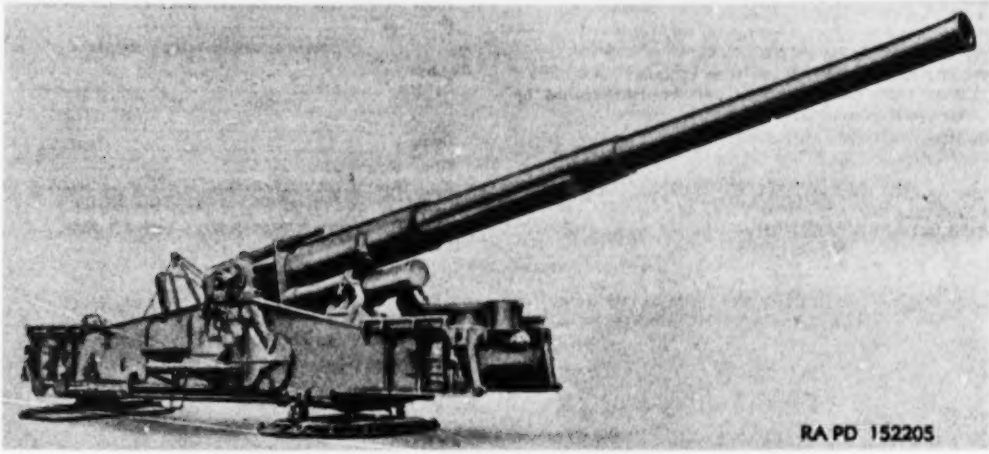
Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

References: SNL D-40, TM 9-8025, TM 9-2350-210-12, MWO 9-1000-217-30/1, MWO 9-1000-217-30/2.

GUN, HEAVY, MOTORIZED: 280-MM, M65, W/E (CANNON, 280-MILLIMETER GUN: M66 (T131); RECOIL MECHANISM: M32 (T80E3) AND T81 OR M32 (T80E3) AND M33 (T81E1); CARRIAGE, 280-MILLIMETER GUN: M30 (T72))



Major item				
Model			*Line item No.*	*Federal stock No.*
Cannon	*Carriage*	*Recoil mechanism*		
M66	M30	M32 (T80E3) and T81	4-16890-10	1080-034-8697
M66	M30	M32 (T80E3) and M33 (T81E1)	4-16890-11	1080-322-9782

General

The GUN, HEAVY, MOTORIZED: 280-mm, M65 w/e, consisting of a CANNON, 280-MILLIMETER GUN, M66; RECOIL MECHANISM: M32 (T80E3) and T81 or M32 (T80E3, and M33 (T81E1) with CARRIAGE: GUN, 280-MILLIMETER: M30, is a mobile, long range, heavy artillery weapon intended for attack on enemy communication centers or field fortifications, especially of masonry or concrete, for counterbattery fire on enemy long range artillery, and for possible use in coast defense operations. It is operated as a fixed mount but is strategically mobile when the gun tube is retracted and the carriage is loaded on the completely detachable units of the heavy artillery transporter T10.

The cannon consists of the tube, jacket, breech ring, and breech bushing as an integral unit, and a detachable breechblock and breech operating mechanism. It is built-up type with the jacket shrunk onto the tube and the breech ring shrunk onto the breech end of the jacket. An extended portion of the jacket forward of the breech ring is of uniform diameter and smoothly finished to provide a bearing surface in the cradle during the recoil and retraction of the tube to the traveling position. Retraction is further facilitated, and the tube supported, by wheels attached to the breech ring which run on rails on the top carriage. Gas erosion of the breechblock is prevented by a DeBange type obturator. Ammunition is separate-loaded.

The gun carriage proper is comprised of three elements: the top carriage, firing base, and float. The top carriage is a rigid, rectangular structure supporting the gun and its various operating mechanisms. The firing base and float are connected by longitudinal tie rods and constitute the bottom carriage upon which the weapon recoils and traverses, and through which it has emplacement contact with the ground. Traversing is accomplished manually through an arc of 15° upon the ball pintle of the firing base and the float. However, the float may be lifted from the ground to traverse the weapon 360° upon the firing base.

The recoil mechanism is of the double recoil type in which the gun tube and top carriage are separately recoiling masses, and which utilizes the weight of the top carriage to absorb recoil force. The primary recoil mechanism is a hydropneumatic type consisting of two recoil cylinders and a recuperator cylinder assembled with a manifold. It is one of the tipping parts and is attached to the cradle below and parallel to the gun tube. The secondary recoil mechanism is a hydropneumatic type consisting of a recoil cylinder and recuperator cylinder attached to the firing bolsters and connected to the elevating pinion shaft housing integral with the top carriage.

Differences among models

Data plate location

The model and serial numbers of the cannon (formerly gun) are stamped on the upper top surface of the breech ring. The carriage nameplate is attached to the right frame member toward the rear. The primary recoil mechanism nameplate is attached to the lower right side of the recoil mechanism manifold. The secondary recoil mechanism nameplate is attached to the upper face of the recoil mechanism manifold.

Classification: Standard B (OTCM 37119).

CHARACTERISTICS

Cannon:
- Weight ....42,050 lb
- Length (without muzzle brake) ....42 ft, 8½ in.
- Length of tube ....41 ft, 9⅞ in.
- Rifling:
  - Length ....34 ft, ⅝ in.
  - Number of grooves 72
  - Twist, right-hand ....one turn in 20 calibers
- Type of breechblock ....interrupted step-thread
- Type of firing mechanism ...electrical contact-percussion hammer
- Estimated accuracy life of tube ....300 rds

Carriage:
  Type of recoil mechanism:
    Primary .... hydropneumatic
    Secondary .... hydropneumatic
  Number of recoil cylinders:
    Primary 2
    Secondary 1
  Length of recoil:
    Primary (max allowable at 55 deg) .... 3 ft, 6 in.
      (max allowable at 10 deg) .... 2 ft, 8 in.
      (normal) ....
    Secondary (max allowable at 55 deg) .... 3 ft, 4 in.
      (max allowable at 10 deg) .... 3 ft
  Capacity of recoil mechanism (including recuperator):
    Primary .... 49.1 gal
    Secondary .... 20.6 gal
  Elevation (max) .... 55°
  Depression (max) .... 0°
  Operation of firing linkage .... manual

AMMUNITION

Types .... HE and separate loading
  NUCLEAR ORDNANCE: See section 10 (when data is available).

PERFORMANCE

Muzzle velocity (HE, max zone) .... 2,500 fps
Range (HE) .... 31,400 yd

EQUIPMENT

Sighting and fire control:*
  BINOCULAR: M17A1, w/c
  FUZE SETTER: M26
  FUZE SETTER: M25
  MOUNT, TELESCOPE: M30
  POST, AIMING: M1A2
  QUADRANT, FIRE CONTROL: M1A1 (elevation)
  QUADRANT, FIRE CONTROL: gunner's M1A1, w/case
  TABLE, FIRING: FT 280-A-1 (Confidential)
  TABLE, FIRING: FT 280-B-1 (Change No. 1 is Confidential, only.)
  TELESCOPE, PANORAMIC: M12A7C
  TRIPOD, SURVEYING: FSN 6675-240-1881 (To be issued with POST, AIMING, M1 series only when issued for Arctic use.) (issued by Corps of Engineers)
Basic Issue Items: See TM 9-333-1, C3.

*For characteristics and data, see item in sections 14, 18, 27, and 28.

INSTRUCTIONAL MATERIAL

ASSEMBLY, BASE CHARGE: (For 280-mm dummy propelling charge T76).
ASSEMBLY, INCREMENT CHARGE: (For 280-mm dummy propelling charge T76).
EXTRACTOR, DUMMY PROJECTILE, HAND: 280-mm
PROJECTILE, 280 MILLIMETER: dummy, T299E2
SPARE PARTS SET, 280 MILLIMETER DUMMY PROJECTILE: T299E2.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

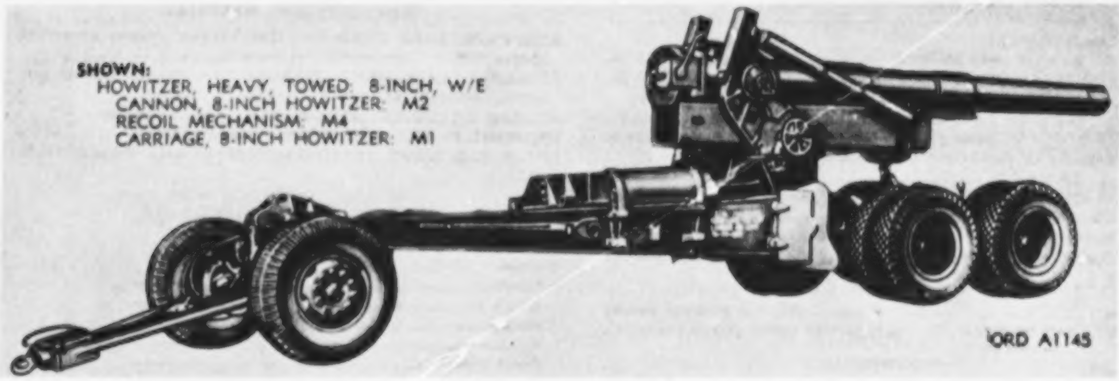
Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

PRIME MOVER

Transporter, heavy artillery, T10 consisting of:
  Front chassis, truck tractor, M249 .... 4 x 4
  Rear chassis, truck tractor, M250 .... 4 x 4

References: TM 9-333-11, TM 9-8019, TM 9-1000-201-20P.

HOWITZER, HEAVY, TOWED: 8-INCH, M115, W/E (CANNON, 8-INCH HOWITZER: M2 OR M2A1; RECOIL MECHANISMS: M4-SERIES; CARRIAGE, 8-INCH HOWITZER: M1)


SHOWN:
HOWITZER, HEAVY, TOWED: 8-INCH, W/E
CANNON, 8-INCH HOWITZER: M2
RECOIL MECHANISM: M4
CARRIAGE, 8-INCH HOWITZER: M1
ORD A1145

Model			*Major item*	
Cannon	*Carriage*	*Recoil mechanism*	*Line item No.*	*Federal stock No.*
M2 or M2A1	M1	M4 or M4A1 or M4A2 or M4A3	--------------	1030-322-9788

General

The HOWITZER, HEAVY, TOWED: 8-inch, M115, w/e, consisting of a CANNON, 8-INCH HOWITZER: M2 or M2A1; RECOIL MECHANISMS: M4-SERIES; CARRIAGE, 8-INCH HOWITZER: M1, is a towed, heavy field artillery weapon which provides heavy, long range fire against heavy fortifications, lines of communications, gun emplacements, and bridges. Ammunition for the weapon is of the separate-loading type.

The cannon consists of a tube, breech ring, and breech mechanism. The tube is screwed into an internal thread in the breech ring and locked in place by three screws. The breech mechanism, attached to the breech ring, consists of the breechblock carrier assembly, breechblock assembly, counterbalance assembly, obturator group, and operating lever assembly. Bearing surface for support and alinement on the mount is provided by smoothly finished longitudinal rails. The breech ring carries lugs on the side for support of the breechblock carrier and on the bottom for attachment of the recoil mechanism.

The carriage consists of equilibrator assemblies, elevating and traversing mechanisms, two single-wheel, single-axle heavy limber M5, four dual-wheel, two-axle bogie, and two trails. Four spades, carried on the trails, are used to emplace the weapon.

The recoil mechanism is a variable hydropneumatic type shock absorber that decreases the energy of the recoil gradually and so avoids violent movement of the cannon or carriage. It is installed in the cradle of the carriage.

Differences among models

The cannon M2A1 is ballistically and physically interchangeable with the cannon M2. Both the M2 and M2A1 are capable of being mounted on the carriage M1 and recoil mechanisms, M4, M4A1, M4A2 or M4A3. The M2A1 has approximately the same weight and center of gravity as the M2 but is designed with superior strength steels. The breech ring and mating tube threads on the M2A1 materiel conform to present cannon thread standards: this prevents the M2A1 breech rings and tubes from being interchangeable with corresponding components of the M2. All other components of the cannon are basically interchangeable.

The recoil mechanism M4A1, is basically the M4 with a new type floating piston ORD No. 7115775 incorporated in the mechanism to reduce leakage of nitrogen. The recoil mechanism M4A2 is the M4A1 which has been modified by inserting spacers in the present floating pistons to keep the two halves separated the required distance. The mechanism M4A3 is the new manufacture of the M4A1 with a one-piece floating piston.

Data plate location

The cannon identification plate is located on the breech end; the carriage identification plate above the elevating wheel; the limber identification plate on the limber lift bracket; and the recoil mechanism on the right side, breech end of the cradle.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Cannon and mount:
  Overall:
    Length ....432 in.
    Width ....112 in.
    Height ....108 in.
Cannon:
  Weight (complete w/breech mechanism) ....10,240 lb
  Weight of tube ....9,885 lb
  Length ....17 ft, 5⅜ in.
  Length of tube (muzzle to rear face of
    breech ring) ....16 ft, 10½ in.
  Rifling:
    Length ....13 ft, 8⅝ in.
    Number of grooves 64
    Twist, right hand ....one turn in 25 calibers
  Type of breechblock ....interrupted screw stepped thread
  Type of firing mechanism ....percussion hammer
  Estimated accuracy life of tube ....5,600 rd
Carriage:
  Elevation (max) ....65°
  Depression (max) ....−2°
  Traverse ....30° R or L
  Tire size and type ....11:00 x 20, standard
  Tire pressure:
    Carriage ....45 lb
    Limber ....65 lb

Recoil mechanism:
  Type of recoil mechanism ....hydropneumatic (variable)
  Number of recoil cylinders 3
  Length of recoil:
    Normal recoil at 375 mils elevation
      (normal charge) ....4 ft, 8 in.
    Recoil at 300 to 425 mils elevation (supercharge) 5 ft, 7 in.
  Capacity of recoil mechanism ....15½ gal

AMMUNITION

Types ....separate-loading—HE
Type of charge ....base and increment
Weights:
  Projectile ....200 lb
  Powder charge:
    Green bag (5 zones) ....13.38 lb
    White bag (7 zones) ....28.75 lb
    Flash reducer M3 is used with propelling charge M2 to reduce muzzle flash when firing at night.
NUCLEAR ORDNANCE: See section 10 (when data is available).

PERFORMANCE

Muzzle velocity (average velocity with a new howitzer) ..1,950 fps
Range (max) ....18,510 yd
Rate of fire:
  Normal ....1 round per 2 min
  Maximum ....1 round per min

EQUIPMENT

Sighting and fire control:*
  On-carriage equipment:
    FUZE SETTER: M26
    FUZE SETTER: M28
    MOUNT, QUADRANT: M1
    MOUNT, TELESCOPE: M18A1
    MOUNT, TELESCOPE: M71
    QUADRANT, FIRE CONTROL: gunner's M1A1, w/case
    TELESCOPE, ELBOW: M16A1G
    TELESCOPE, PANORAMIC: M12A7C
  Off-carriage equipment:
    POST, AIMING: M1A2
    TABLE, FIRING: FT 8-J-1
    THERMOMETER, SELF-INDICATING, BIMETALLIC: M1, W/CASE complete.
    WATCH, WRIST: (all services)
Basic Issue Items: See ORD 7 SNL D-29.

INSTRUCTIONAL MATERIAL

Subcaliber equipment:
  CANNON, 37-MILLIMETER GUN: M1916 on MOUNT, GUN: subcaliber, 37-mm, M10, w/RECOIL MECHANISM: 37-mm gun M1916, w/e.
PROJECTILE, 8-INCH HOWITZER, DUMMY: M14
PROJECTILE, 8-INCH GUN OR HOWITZER, DUMMY: Mk1A1

STORAGE AND SHIPMENT DATA

Within Continental United States

Cannon w/carriage M1 and limber M5 (KD) in two packages:
  Pkg. No. 1/2—Cannon:
    Shipped 1 cannon per crate (fully sheathed, skid-type crate, breech end only).
    Length (overall) ....18 ft, 5 in.
    Width ....2 ft, 7⅛ in.
    Height ....3 ft, 3½ in.
    Volume ....157 cu ft
    Gross weight ....11,250 lb
    Ship tons 3.93
  Pkg. No. 2/2—Carriage M1 w/limber M5 and equipment:
    Shipped 1 carriage M1 w/limber M5 and equipment per crate (fully sheathed, skid-type).
    Length ....16 ft, 9½ in.
    Width ....4 ft, 6⅝ in.
    Height ....3 ft, 1¼ in.
    Volume ....1,196.9 cu ft
    Gross weight ....29,430 lb
    Ship tons 29.92
Heavy carriage limber M5 (KD):
  Shipped 1 heavy carriage limber M5 (KD) per crate (fully sheathed, skid-type).
  Length ....8 ft, 11½ in.
  Width ....4 ft, 6⅝ in.
  Height ....3 ft, 1¼ in.
  Volume ....126.7 cu ft
  Gross weight ....2,940 lb
  Ship tons 3.19
  Note. Cannon, carriage and limber also shipped uncrated in traveling position.

Outside Continental United States

Cannon w/carriage M1 and limber M5 (KD) in two packages:
  Pkg. No. 1/2—Cannon:
    Shipped
    Length (overall) ....
    Width ....
    Height ....
    Volume ....
    Gross weight ....
    Ship tons ....
  Pkg. No. 2/2—Carriage M1 w/limber M5 and equipment:
    Shipped
    Length ....
    Width ....
    Height ....
    Volume ....
    Gross weight ....
    Ship tons ....
Heavy carriage limber M5 (KD):
  Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

PRIME MOVER

18-ton, high-speed tractor M4 or 7½-ton 6 x 6, truck, M5

TIME TO EMPLACE

½ to 6 hr.

References: SNL D-29, TM 9-3004, TM 9-1350, TM 9-1030-203-20P.

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* For characteristics and data, see item in sections 14, 18, 26, and 29.

CANNON, 8-INCH HOWITZER: M2A1E1; MOUNT, GUN-HOWITZER: M158; RAMMER AND LOADER ASSEMBLY ORD NO. 10898300; MECHANISM, FIRING, CANNON: M35

(Illustration will be added at a later date)

Secondary Item

Model *Cannon*	*Mount*	*Mechanism*	*Line item No.*	*Federal stock No.*
M2A1E1	......	......	....	....
....	M158	......	....	1025-863-5613
....	......	M35	....	1025-895-9182

General

CANNON, 8-INCH HOWITZER: M2A1E1 with MOUNT, GUN-HOWITZER: M158, RAMMER AND LOADER ASSEMBLY ORD No. 10898300 AND MECHANISM, FIRING, CANNON: M35, provides the major armament for the HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 (T236E1).*

The 8-inch howitzer cannon M2A1E1 consists of a barrel assembly screwed into an internal thread in a breech ring and locked in place by three screws. The barrel assembly is of monobloc (one-piece) construction. The chamber and bore are chrome-plated. Bearings for support and alinement in the mount are provided by longitudinal rails attached to three hoops shrunk on the jacket. The rear half of the breech ring is lined with a breech ring bushing to accommodate an interrupted screw-type breechblock and a bottom lug for connection to the recoil mechanism.

The gun-howitzer mount M158 includes the recoil mechanism of the hydropneumatic variable recoil type, which controls the forces created by firing and checks the movement of the recoiling parts gradually, to avoid displacement of the vehicle, and also returns the recoiling parts into their original position. The major components are the recoil, counterrecoil, and recuperator cylinders, contained in the gun cradle, and the replenisher cylinder.

The rammer and loader assembly operates to lift a projectile from the rear or left side of the vehicle, position it for ramming, and ram it into the cannon chamber. Hydraulic power for operation is obtained from the vehicle hydraulic system. Operation can also be accomplished manually by means of handcranks.

The firing mechanism is a percussion type and is operated manually by a lanyard.

Differences among models

Data plate location

Classification:

Mount, M158 .... Standard A (OTCM 37684)
Cannon, M2A1E1 ....

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* For characteristics and data, see item in section 23.

CHARACTERISTICS

Cannon:	
Weight:	
Cannon complete	10,240 lb
Barrel assembly	8,490 lb
Breech mechanism	1,750 lb
Tipping parts	14,740 lb
Length:	
Tube	16 ft, 10.5 in.
Cannon	17 ft, 9 in.
Rifling:	
Length	164.8 in.
Number of grooves	64
Bore:	
In calibers	25
Diameter	8 in.
Breechblock	interrupted screw, stepped thread
Firing mechanism:	
Type	percussion
Operation	manual, by lanyard
Mount:	
Weight	4,500 lb
Recoil mechanism:	
Weight (approx)	3,925 lb
Type	hydropneumatic
Number of recoil cylinders	1
Length of recoil:	
Normal	high elevation—28 to 30 in.
Maximum	low elevation—68 to 70 in.
Equilibrator	pneumatic
Type of recoil oil	FSN 9150-255-4443 (OHC)
Oil capacity	15 gal
Oil reserve:	
Replenisher	2 pt
Recuperator	2 pt
Elevation (max)	65 deg
Depression	0 deg
Turret traverse (right or left)	30 deg
Traversing and elevating operation	manual or hydraulic

AMMUNITION

Type	HE, dummy
Loading	separate

PERFORMANCE

Muzzle velocity	1,950 fps
Range (maximum)	16,930 meters
Allowable recoil (variable)	70 in.
Rate of fire:	
Normal	1 rd per 2 min
Maximum	1 rd per 1 min
Maximum number of rounds fired consecutively at max rate	
Maximum powder pressure permitted	
Average accuracy life	rd

EQUIPMENT

Sighting and fire control:*
- Installed on self-propelled howitzer M110 prior to issue:
  - MOUNT, TELESCOPE: direct fire, M138
  - MOUNT, TELESCOPE: panoramic, M137 (T186E3)
- Boxed and stowed on self-propelled howitzer M110 prior to issue:
  - BINOCULAR: M17A1
  - FUZE SETTER: M26 and M27
  - LIGHT, INSTRUMENT: M52
  - PERISCOPE, TANK: M17
  - POST, AIMING: M1A2
  - QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
  - QUADRANT, FIRE CONTROL: gunner's, M1A1
  - REFLECTOR, AIMING POST: clear, M1
  - REFLECTOR, AIMING POST: red, M2
  - SCALE, GRAPHICAL FIRING: M71
  - SCALE, GRAPHICAL FIRING: site, M72
  - TELESCOPE, ELBOW: direct fire, M116C
  - TELESCOPE, PANORAMIC: M115 (T146)

Basic Issue Items: See TM 9-2300-216-10

INSTRUCTIONAL MATERIAL

PROJECTILE, 8-INCH, DUMMY: M14
PROJECTILE, 8-INCH, DUMMY: MK1
CHARGE, PROPELLING, 8-INCH, DUMMY: M4
PRIMER, PERCUSSION INERT: MK2A4

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 howitzer cannon	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 howitzer cannon	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Reference: TM 9-2300-216-10

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* For characteristics and data, see item in sections 12, 14, 18, and 27.

SECTION 7

LAUNCHERS, ROCKET AND PYROTECHNIC

(CLASS 1055)

Page

CART ASSEMBLY, TRANSPORT, 762 MILLIMETER ROCKET: M465 (For characteristics and data, see item in section 19, page 19-222)

CART, ROCKET TRANSPORT, 318 MILLIMETER: M14 (For characteristics and data, see item in section 19, page 19-232)

HANDLING UNIT, ROCKET, TRAILER MOUNTED: 762-mm, M405 and M405A1 (For characteristics and data, see item in section 19, page 19-223)

HANDLING UNIT, ROCKET, TRUCK MOUNTED: 318-mm, M572 (For characteristics and data, see item in section 19, page 19-233)

HEATING AND TIE DOWN UNIT, 762 MILLIMETER ROCKET, TRUCK MOUNTED: M78 and M78A1 (For characteristics and data, see item in section 19, page 19-226)

LAUNCHER, ROCKET: 3.5-inch, M20, M20B1, M20A1, M20A1B1, w/e 7-2

LAUNCHER, ROCKET: multiple, 115-mm, M91 (T145) w/e 7-4

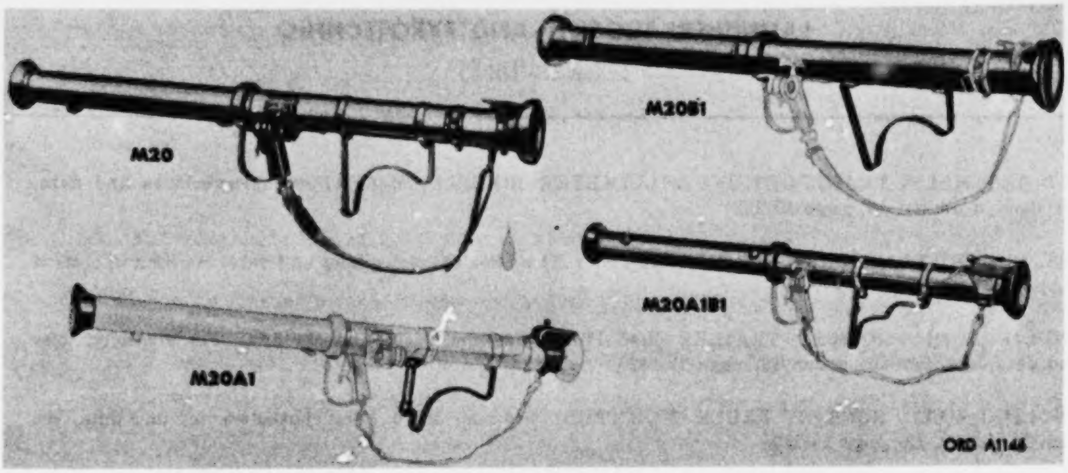
LAUNCHER, ROCKET: 318-mm, M34, w/e 7-5

LAUNCHER, ROCKET: 762-mm, M33, w/e 7-6

LAUNCHER, ROCKET: 762-mm, truck-mounted, M289, w/e 7-7

LAUNCHER, ROCKET: 762-mm, truck-mounted, M386, w/e 7-9

LAUNCHER, ROCKET: 3.5-INCH, M20, M20B1, M20A1, M20A1B1, W/E



Major Item

Model	*Line item No.*	*Federal stock No.*
M20	4-20800-10	1055-575-0064
M20A1	4-20800-20	1055-840-1841
M20A1B1	4-20800-30	1055-840-1842
M20B1	4-20800-40	1055-591-0217

General

LAUNCHER, ROCKET: 3.5-inch, M20, M20A1, M20A1B1, or M20B1, w/e, is a two-piece, smooth-bore, breech-loading, shoulder weapon of the open-tube type. They are used to launch 3.5-inch rockets and high explosive rockets against ground targets and can be fired from the standing, kneeling, sitting, or prone positions. The rockets are fired electrically by a magneto-type firing mechanism in the trigger grip. These weapons have very little recoil since the propulsion of the rocket is accomplished by the jet action of the propellant powder in the stabilizer tube of the rocket and does not depend upon gas pressure built up inside the launcher tube. Each launcher is issued with an optical type reflecting sight having a bellows-type rubber eyepiece. When firing the launcher, it is essential that no personnel or flammable material be directly behind the launcher, within a distance of 25 yards, to prevent being burned by the propellant. The danger zone is a triangular area with a base and a height of 25 yards. When firing from the prone position, the operator's body should be at an angle of at least 45° from the direction of fire so as to avoid being burned by the propellant. On launchers of early manufacture, a bipod and monopod were provided to permit firing from the prone position. However, launchers of present manufacture do not include these components. On some of the launchers of early manufacture, the monopod was modified by the removal of its extending leg (see launcher M20A1 illustrated).

Differences among models

The barrels of the M20 and M20A1 are manufactured from aluminum tube stock and the component parts fastened to the barrels by means of screws. The barrels of the M20A1B1 and M20B1 are aluminum castings and many of the component parts of the barrel are cast integral with the barrel effecting a slight saving in overall weight. With the addition of a new contactor latch, the launcher M20 becomes the launcher M20A1 and by the same addition the launcher M20B1 becomes the launcher M20A1B1. In addition, there are minor differences which are apparent when the illustrations are compared.

Data plate location

The model and serial numbers are stamped at the rear end of the rear barrel of the launcher M20 and are cast on top of the rear barrel of launcher M20B1.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight of launcher (approx):	
M20 or M20A1 (w/o bipod and monopod)	18 lb
M20B1 or M20A1B1 (w/o bipod and monopod)	12 lb
Length overall:	
Assembled for firing	5 ft, ¼ in.
Assembled for carrying (approx)	2 ft, 6 in.
Type of firing mechanism	electrical

AMMUNITION

Types	HEAT, WP, and practice

PERFORMANCE

Muzzle velocity:	
HEAT (M35)	485 fps
HEAT (M28A2)	317 fps
Range:	
HEAT (M35)	1,300 yd
HEAT (M28A2)	945 yd
Rate of fire	

EQUIPMENT

Sighting and fire control:*

The following, which are part of the launcher, are used for sighting:

SIGHT: reflecting, assy (ORD No. 7162947) (M20A1 or M20A1B1).

SIGHT: reflecting, assy (ORD No. 7141999) (M20 or M20B1).

SIGHT: rocket launcher, M39 (FSN 1240-346-8684) (replacement for above sights).

Basic Issue Items: See ORD 7 SNL B-42.

INSTRUCTIONAL MATERIAL

GRAPHIC TRAINING AID AND DEVICES: See DA Pam 310-5.

* For characteristics and data, see item in section 14.

STORAGE AND SHIPMENT DATA

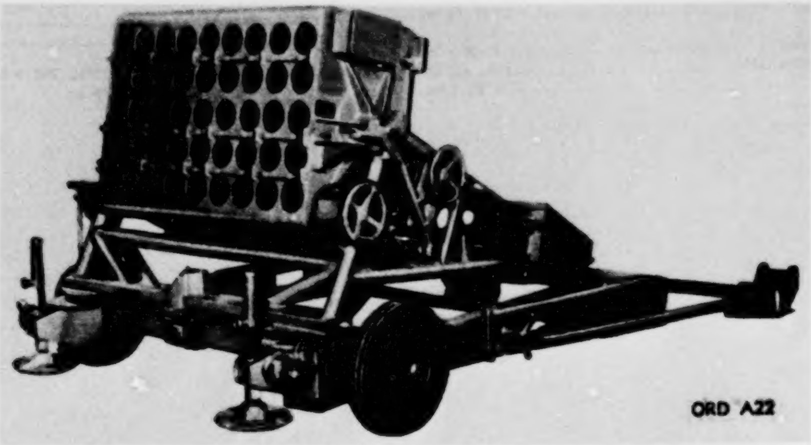
Within and Outside Continental United States

Shipped 4 launchers per wood box (VCI pack).

Length	3 ft. ½ in.
Width:	
M20 or M20B1	2 ft, 8½ in.
M20A1 or M20A1B1	2 ft, 9¼ in.
Height	1 ft. 4 in.
Volume:	
M20 or M20B1	11.0 cu ft
M20A1 or M20A1B1	11.3 cu ft
Gross weight:	
M20 or M20B1	135 lb
M20A1 or M20A1B1	150 lb
Ship tons	0.28

References: TM 9-2002, TM 9-2205, TM 9-1055-201-12P, TM 9-1055-201-35P, FM 23-32.

LAUNCHER, ROCKET: MULTIPLE, 115-MM, M91 (T145), W/E



Major Item

Model	*Line item No.*	*Federal stock No.*
M91	4-21861-20	1055-675-9532

General

LAUNCHER, ROCKET: multiple, 115MM, M91, is a 45-tube, cluster type launcher designed to launch the 115MM chemical rocket, M55. The rockets are packaged, shipped, stored and fired from the shipping and firing containers which are muzzle loaded into the launcher cluster openings and are fired electrically in a nonadjustable, preset sequence, that will allow only one rocket to be fired at a time. The launcher is primarily used for area coverage where dispersion of chemical agent is desirable. The primary source of firing voltage is supplied from a fully charged 24 volt, truck mounted battery. The emergency, or secondary, electrical power is supplied from a thermal cell battery located in the remote firing box assembly. The launcher may be transported by helicopter and fired from the ground, or transported by and fired from a 2½ ton, M35 cargo truck. The M91 can be manhandled on its wheels for short distances but is not designed to be towed.

Differences among models

Data plate location

The launcher nameplate is attached to the left side of the cluster.

Classification: Standard A (for USMC use) (OTCM 37435).

CHARACTERISTICS

Weight:	
Launcher w/rockets	4,215 lb
Launcher w/o rockets	1,200 lb
Length	12 ft, 8 in.
Height	5 ft, 7 in.
Width	9 ft, 9 in.
Turning radius (hand)	360 deg
Fording depth, w/Kit for vehicle	72 in.
Tire pressure	25 psi
Elevation:	
Maximum	1,066.66 mils
Minimum	14.22 mils
Traverse, R or L	177.77 mils

° For characteristics and data, see item in sections 14 and 18.

AMMUNITION

Type	(rocket—M55 (T238))	Chem
	(rocket—M60)	Dummy
	(rocket—M61)	Training

PERFORMANCE

Range (max)	12,000 yd

EQUIPMENT

Sighting and fire control:°
- HOLDER, TELESCOPE MOUNT: XM7.
- POST, AIMING: M1A2.
- QUADRANT, FIRE CONTROL: M1A1, w/case, carrying M82.
- SIGHTUNIT: M34A2C (early production launchers).
- SIGHTUNIT: M53 (XM53E2) (later production launchers).
- TABLE, FIRING, ROCKET: FTR-115-C-1.

Basic Issue Items: See TM 9-1055-215-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 launcher disassembled, w/e per wood shipping container.

Length	9 ft, 1 in.
Width	7 ft, ⅝ in.
Height	4 ft, 7¼ in.
Volume	305 cu ft
Gross weight	2656 lb
Ship tons	7.62

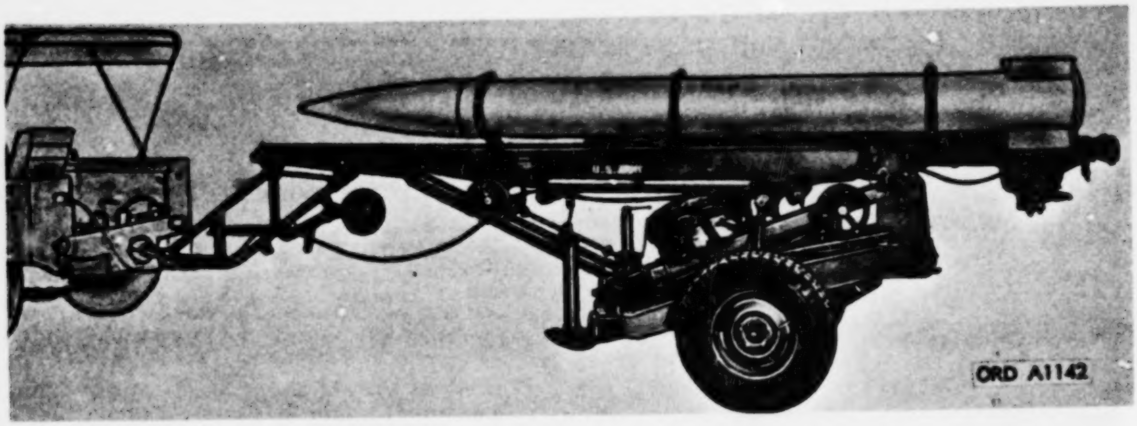
Outside Continental United States

Shipped 1 launcher disassembled, w/e per wood shipping container.

Length	9 ft, 1 in.
Width	7 ft, ⅝ in.
Height	4 ft, 7¼ in.
Volume	305 cu ft
Gross weight	2656 lb
Ship tons	7.62

References: TM 9-1055-215-12, TM 9-1055-215-20P, TM 9-1055-215-35, TM 9-1055-215-35P.

LAUNCHER, ROCKET: 318-MM, XM34, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
XM34	4-20655-02	1055-670-7745

General

LAUNCHER, ROCKET: 318-mm, XM34, w/e, is a mobile, field artillery type launcher which provides a base for launching large caliber, free-flight, fin-stabilized, surface-to-surface rockets. It is a helicopter-transportable launcher, designed to be airlifted in phase 1 (parachute and assault landing) airborne operations, towed by standard military vehicles with full ground mobility, or moved by hand for short distances. The launcher is composed principally of a launching beam rail assembly, top carriage assembly, elevating mechanism assembly, and bottom carriage assembly. Jack assemblies enable emplacement on a 5° slope and final cant correction of the launching beam. Traverse of the launching beam to the right or left is provided by means of a pinion and rack-type traverse mechanism. The launching beam is elevated by a double extension ball screw mechanism and traversed by a rack and pinion drive system. The beam is cross-leveled by the two jack assemblies which connect the front floats to the bottom carriage.

Differences among models

Data plate location

The identification plate for the launcher XM34 is located below the trunnion on the rear-left side of the launcher.

Classification: Limited production (OTCM 37244).

CHARACTERISTICS

Weight:	
Launcher, w/rocket, w/tool kit	2,233 lb
Launcher, w/o rocket, w/o tool kit	1,317 lb
Length	18 ft, 1 in.
Height:	
Launcher, w/rocket (to top of fins)	5 ft, 5⅛ in.
Launcher, w/o rocket	4 ft, 1⅛ in.
Width	5 ft, 2 in.
Road clearance	11 in.
Turning radius:	
W/¾-ton	21 ft, 2 in.
W/¼-ton	17 ft, 6 in.
Fording depth, w/o fording kit	40 in.
Tire pressure	28 psi
Elevation:	
Maximum (on level ground)	55° (977.79 mils)
Minimum (on level ground)	0° (0 mils)
Traverse, R or L	15° (266.67 mils)

AMMUNITION

Type (rocket XM51)	flash smoke

NUCLEAR ORDNANCE: See section 10 (when data is available).

PERFORMANCE

Velocity	
Range	20,400 meters
Rate of fire	

EQUIPMENT

Sighting and fire control:*
- HOLDER, TELESCOPE MOUNT: XM7
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: M1A1, gunner's, w/CASE
- SIGHTUNIT: M84A2C, w/CASE

Basic Issue Items: See TM 9-1055-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	18 ft, 1 in.
Width	5 ft, 2 in.
Height	4 ft, 1⅛ in.
Volume	362 cu ft
Gross weight	1,850 lb
Ship tons	9.05

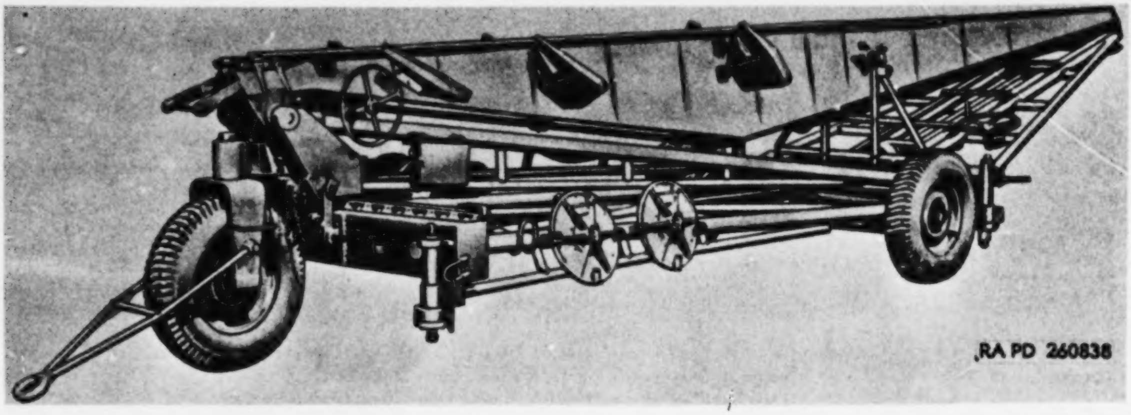
Outside Continental United States

Shipped	
Length	18 ft, 1 in.
Width	5 ft, 2 in.
Height	4 ft, 1⅛ in.
Volume	400 cu ft
Gross weight	2,233 lb
Ship tons	10

References: TM 9-1055-212-12, TM 9-1055-212-35.

* For characteristics and data, see item in sections 14 and 18.

LAUNCHER, ROCKET: 762-MM, M33, W/E



Model	*Major item* *Line item No.*	*Federal stock No.*
M33	4-20657-01	1055-607-0336

General

LAUNCHER, ROCKET: 762-mm, M33, w/e, is a helicopter-transportable field artillery weapon which provides a base for launching surface-to-surface, large caliber, free-flight, fin-stabilized rockets against terrestrial targets. It consists principally of a launching beam assembly, top carriage assembly, bottom carriage assembly, and elevating and traversing mechanisms. Elevation is accomplished by screw-type mechanisms which can be operated manually or electrically with an elevating tool assembly. Traversing is accomplished by a rack and sprocket shaft which is manually operated. Cross-leveling and stabilizing are accomplished manually by four screw-type leveling jack assemblies. The launcher is primarily a helicopter-transportable weapon; however, it may be airdropped from a cargo plane, carried in assault aircraft, towed by a motor vehicle, or towed manually for short distances.

Differences among models

Data plate location

The identification plate for the launcher M33 is located on the left-rear side of the top carriage assembly.

Classification: Standard A (OTCM 37711 and 37479).

CHARACTERISTICS

Weight:	
Launcher w/rocket	10,288 lb
Launcher w/o rocket	4,375 lb
Length:	
Launcher w/rocket	32 ft
Launcher w/o rocket	28 ft, 10 in.
Height:	
Launcher w/rocket	10 ft
Launcher w/rocket, w/o fins	7 ft, 7 in.
Launcher w/o rocket	5 ft, 1 in.
Width	6 ft, 11 in.
Road clearance	9 in.
Departure angle	22°
Turning radius	21 ft, 2 in.
Tire pressure	55 psi
Elevation:	
Maximum	62° (1,102 mils)
Minimum	—1° (16 mils)
Traverse, R or L	10° (177.78 mils)

AMMUNITION

Type (Rocket—M31-series and XM50) .... HE and practice

NUCLEAR ORDNANCE: See section 10 (when data is available).

PERFORMANCE

Velocity	(classified)
Range	(classified)
Rate of fire	(classified)

EQUIPMENT

Sighting and fire control:*
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: M1A1 w/CASE
- SIGHTUNIT: XM43 (modified)
- TABLE, FIRING: FTR 762-C-1, FTR 762-D-1, FTR 762-C-1WC, FTR 762-D-1WC.

Basic Issue Items: See TM 9-1055-204-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

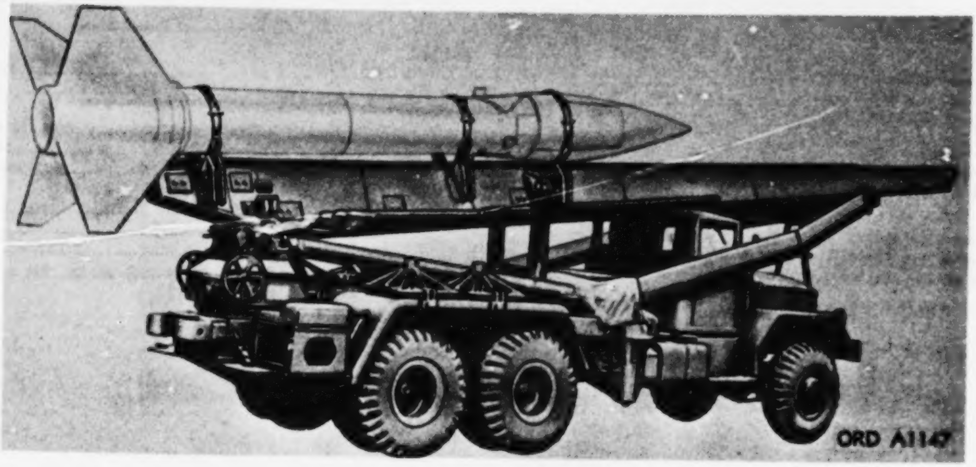
Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1055-204-12, TM 9-1055-204-20P, TM 9-1055-204-35, TM 9-1055-204-35P.

* For characteristics and data, see item in section 18.

LAUNCHER, ROCKET: 762-MM, TRUCK-MOUNTED, M289, W/E



	Major item	
Model	*Line item No.*	*Federal stock No.*
M289	4-20660-10	1055-034-8059

General

LAUNCHER, ROCKET: 762-mm, truck-mounted, M289, w/e, is a mobile, heavy field artillery type launcher which provides a base for launching surface-to-surface, large caliber, free-flight, fin-stabilized rockets against terrestrial targets. The launcher M289 is composed of the 762-mm rocket launcher (ORD No. 8417300) and the 5-ton, 6 x 6 truck chassis M139D (ORD No. 8415451). The launcher M289 consists of a 5-ton 6 x 6 chassis (M139D) which is equipped with five screw-type leveling jack assemblies, a launching beam assembly, elevating mechanism group, equilibrator assemblies, traversing mechanism group, and the electrical system. The jack assemblies are used to level the launcher on any lengthwise slope of 10° or less. The launcher is also cross-leveled 100 percent with the leveling jack assemblies and leveling vials mounted on the launcher. The launcher is equipped for power and manual elevating but provides for manual traversing only.

Differences among models

Data plate location

The 5-ton 6 x 6 truck chassis M139C identification plate is mounted on the instrument panel to the right of the instrument cluster. When the 762-mm rocket launcher ORD No. 8417300 is mounted on the chassis M139C, this chassis is modified and becomes an M139D chassis. The weight and dimensional data on this identification plate is not applicable when the launcher has been mounted on the truck chassis in which case the weight and dimensional data contained in the tabulated data portion of TM 9-1055-202-10 will apply. The gasoline-engine generator set M25 identification plate is mounted on the right side of the top carriage assembly. The rocket launcher M289 identification plate is mounted on the right side of the top carriege assembly.

Classification: Standard B (OTCM 37119).

CHARACTERISTICS

Weight:	
Launcher w/rocket	47,660 lb
Launcher w/o rocket	41,800 lb
Length:	
Launcher w/rocket	45 ft, 1 in.
Launcher w/o rocket	42 ft, 4 in.
Height:	
Launcher w/rocket	12 ft, 7½ in.
Launcher w/o rocket	12 ft, 6⅝ in.
Width	10 ft
Road clearance	1 ft, 1 in.
Turning radius	54 ft
Fording depth (max):	
w/fording kit	6 ft, 6 in.
w/o fording kit	2 ft, 6 in.
Tire pressure:	
Front tires	60 psi
Rear tires	45 psi
Elevation:	
Maximum	60° (1,066.66 mils)
Minimum	5° (88.85 mils)
Traverse, R or L	15° (266.66 mils)

AMMUNITION

Types (rocket—M31-series and XM50)	HE and practice

NUCLEAR ORDNANCE: See section 10 (when data is available).

PERFORMANCE

Range (at 49° elevation)	(classified)
Rate of fire	(classified)

EQUIPMENT

Sighting and fire control:*
- MOUNT, QUADRANT: M1
- MOUNT, TELESCOPE: M30
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: M1A1, w/CASE
- TABLE, FIRING: 762-B-2
- TELESCOPE, PANORAMIC: M12A7C
- TRIPOD, SURVEYING: FSN 6675-240-1881 (To be issued w/AIMING POST M1 series ONLY when issued for arctic use.) (Issued by Corps of Engineers.)

Basic Issue Items: See TM 9-1055-202-10 and C1.

* For characteristics and data, see item in sections 14, 18, and 28.

INSTRUCTIONAL MATERIAL

GRAPHIC TRAINING AID: See DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

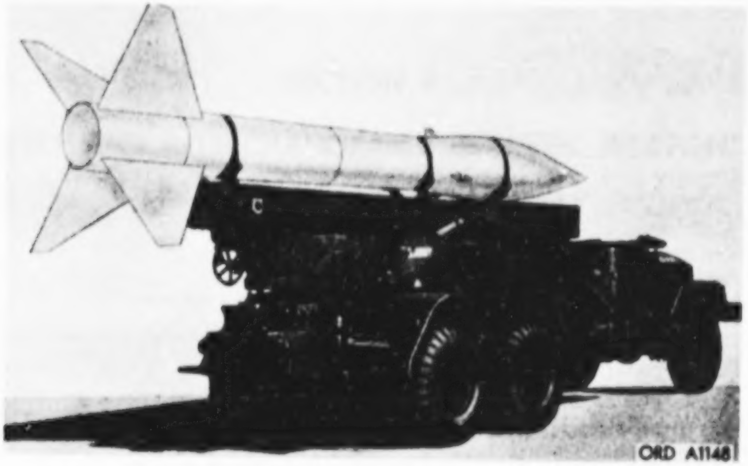
Shipped	
Length:	
Uncrated w/beam	42 ft, 4 in.
Uncrated w/o beam	30 ft, 3¼ in.
Beam on two skid bases	42 ft, 4 in.
Width:	
Uncrated (w/ or w/o beam)	10 ft
Beam on two skid bases	4 ft, 11 in.
Height:	
Uncrated w/beam	11 ft, 10 in.
Uncrated w/o beam	8 ft, 10 in.
Beam on two skid bases	2 ft, 7⅝ in.
Volume	
Shipped	
Gross weight:	
Uncrated w/beam	41,800 lb
Uncrated w/o beam	36,100 lb
Beam in crate	9,550 lb
Ship tons	22

Outside Continental United States

Shipped	
Length	42 ft, 4 in.
Width	10 ft
Height:	
w/beam	12 ft, 6¾ in.
w/o beam	10 ft, 2 in.
Volume	5,291.25 cu ft
Gross weight:	
w/beam	42,400 lb
w/o beam	36,700 lb
Ship tons	107.28

References: TM 9-1055-202-10, TM 9-1055-202-20, TM 9-1055-202-20P, TM 9-1055-202-35P.

LAUNCHER, ROCKET: 762-MM, TRUCK-MOUNTED, M386, W/E



ORD A1148

Model	*Major item Line item No.*	*Federal stock No.*
M386	4-20660-11	1055-601-6900

General

LAUNCHER, ROCKET: 762-mm, truck-mounted, M386, w/e, is a mobile, heavy field artillery type launcher which provides a base for launching surface-to-surface, large caliber, free-flight, fin-stabilized rockets. It is composed of the 762-mm rocket launcher (ORD No. 8417300) and the 5-ton 6 x 6, M139 (modified) chassis. The launcher M386 consists of the chassis which is equipped with a gasoline generator set M25, launching beam assembly, elevating mechanism assembly, traversing mechanism group, equilibrator assemblies, and the electrical system. Three screw-type jacks are used to provide stability when elevating or firing the launcher. Elevation of the launcher is either done manually or by power. Traversing is accomplished by a rack and pinion which is operated manually.

Differences among models

Data plate location

The identification plate for the rocket launcher M386 is fastened to the top carriage near the center of the left side. The gasoline engine-generator set M25 data plate is riveted to the front side of the generator control box.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Launcher w/rocket	40,162 lb
Launcher w/o rocket	34,250 lb
Length:	
Launcher w/rocket	35 ft, 8 in.
Launcher w/o rocket	32 ft, 5 in.
Height:	
Launcher w/rocket, fins installed	13 ft, 8 in.
Launcher, w/rocket, w/o fins	11 ft, 3 in.
Launcher, w/o rocket	8 ft, 9 in.
Width	9 ft, 6 in.
Road clearance	1 ft, 2 in.
Turning radius	47 ft
Fording depth (max):	
w/fording kit	5 ft
w/o fording kit	2 ft, 6 in.
Tire pressure:	
Front tires	60 lb
Rear tires	60 lb
Elevation:	
Maximum	70° (1,244.44 mils)
Minimum	0° (0 mils)
Traverse, R or L	15° (266.67 mils)

AMMUNITION

Type (rocket—M31-series and XM50)	HE and practice

NUCLEAR ORDNANCE: See section 10 (when data is available).

PERFORMANCE

Velocity	(classified)
Range	(classified)
Rate of fire	(classified)

EQUIPMENT

Sighting and fire control:*
  MOUNT, QUADRANT: M1
  MOUNT, TELESCOPE: M30
  POST, AIMING: M1A2
  QUADRANT, FIRE CONTROL: M1A1, w/case
  TELESCOPE, PANORAMIC: M12A7C
  TABLE, FIRING: FT-R762-E-1 and FT-R762-F-1
Basic Issue Items: See TM 9-1055-205-10 and C1.

INSTRUCTIONAL MATERIAL

GRAPHIC TRAINING AID: See DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	32 ft, 5 in.
Width	9 ft, 6 in.
Height	8 ft, 9 in.
Volume	2,694 cu ft
Gross weight	38,750 lb
Ship tons	67.35

Outside Continental United States

Shipped	
Length	32 ft, 5 in.
Width	9 ft, 6 in.
Height	8 ft, 9 in.
Volume	2,694 cu ft
Gross weight	34,582 lb
Ship tons	67.35

References: TM 9-1055-205-10, TM 9-1055-205-20, TM 9-1055-205-20P, TM 9-1055-205-35, TM 9-1055-205-35P.

* For characteristics and data, see item in sections 14 and 18.

SECTION 8

ASSEMBLIES INTERCHANGEABLE BETWEEN WEAPONS IN TWO OR MORE CLASSES

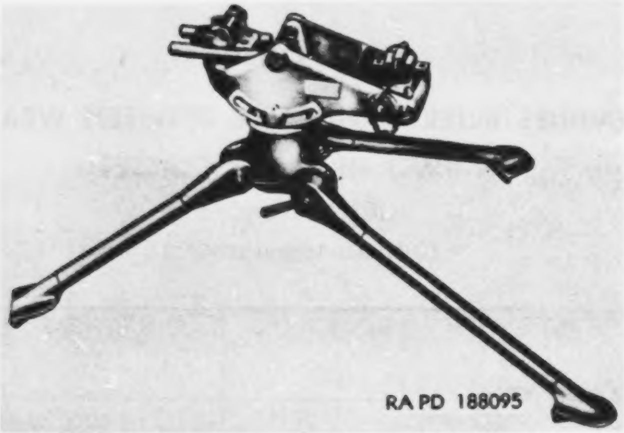
(CLASS 1090)

(Includes tripod mount)

Page

MOUNT, TRIPOD, WEAPON: M74 -- 8-2

MOUNT, TRIPOD, WEAPON: M74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Model	*Major item Line item No.*	*Federal stock No.*
M74, w/e	4-25591-10	1090-317-2424

General

MOUNT, TRIPOD, WEAPON: M74, is a lightweight portable folding mount made of aluminum. It is used primarily for ground fire. This mount has as a central member a socket with three projecting lugs. Attached to these lugs are three legs which may be clamped independently in various position. It is equipped with a spring-type recoil mechanism and a screw-type elevating and traversing mechanism. This mount was designed to replace MOUNT, TRIPOD, MACHINE GUN: caliber .30, M1917A1 for mounting MACHINE GUN, CALIBER .30: Browning, M1917A1, M1919A4, flexible, M1919A4E1, and M1919A6. It also mounts the 57-mm and 75-mm rifles for antitank ground fire.

Differences among models

Data plate location

The identification plate containing the name, model designation, manufacturer, and serial number is located on the left-hand side of the cradle and pintle group.

Classification: Standard B (OTCM 35641).

CHARACTERISTICS

Weight (approx)	29½ lb
Height (legs locked in "O" position)	21 in.
Spread between rear legs (legs locked in "O" position)	33 in.
Distance front leg to midpoint between rear legs	39½ in.
Traverse	360°

EQUIPMENT

Sighting and Fire Control

Basic Issue Items: See ORD 7 SNL A-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box.

Length	2 ft, 10 in.
Width	1 ft, 9 in.
Height	1 ft, 2 in.
Volume	5.9 cu ft
Gross weight	75 lb
Ship tons	0.15

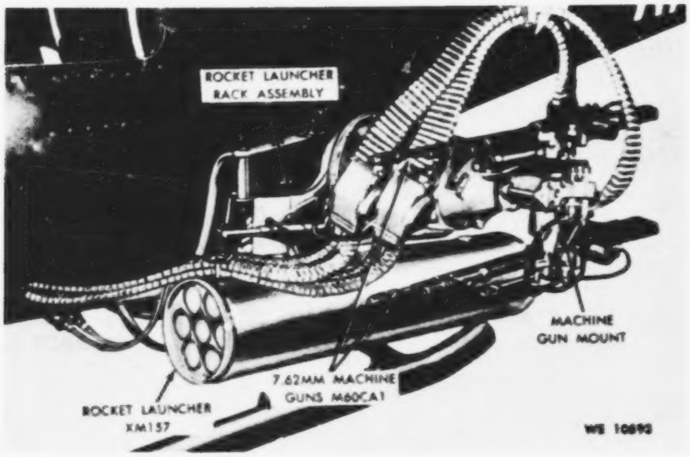
Outside Continental United States

Shipped mount per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL A-86, TM 9-2005, TM 9-8062, TM 9-8140.

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN, 2.75-INCH ROCKET LAUNCHER: XM16 (MACHINEGUN, 7.62-MILLIMETER: M60CA1; MOUNT, MACHINEGUN, 7.62-MM, HELICOPTER ARMAMENT SUBSYSTEM (7792569); LAUNCHER, ROCKET: XM157 OR XM158; MOUNT, ROCKET LAUNCHER, 2.75-INCH, HELICOPTER ARMAMENT SUBSYSTEM (11700100))



Model	Major item Line item No.	Federal stock No.
XM16	A90391	1090-903-1014

General

ARMAMENT SUBSYSTEM, HELICOPTER, 7.62-MILLIMETER MACHINEGUN, 2.75-INCH ROCKET LAUNCHER: XM16 is a dual-weapon subsystem designed for installation on the UH-1B helicopter. The subsystem is composed of four MACHINEGUNS, 7.62-MILLIMETER: M60CA1*; one MOUNT, MACHINEGUN, 7.62-MM, HELICOPTER ARMAMENT SUBSYSTEM*; two LAUNCHER, ROCKETS: airborne, 2.75-inch FFAR, XM157 or XM158*; and one MOUNT, ROCKET LAUNCHER, 2.75-inch HELICOPTER ARMAMENT SUBSYSTEM*. The machinegun portion of the subsystem (four machineguns and mount) is substantially the same as the M6 armament subsystem. The rocket launcher mount is composed of left-hand and right-hand rack and support assemblies, which carry the rocket launchers; a rocket intervalometer, mounted in the instrument console in the helicopter cabin, one infinity reflex sight XM60 and one sight roof mount, fixed to the helicopter cabin roof above the pilot's windshield. When the subsystem is energized, the rocket launcher portion provides the pilot with the capability of firing seven pairs of rockets in addition to the suppressive fire capability of the machinegun portion of the subsystem. As in the M6 armament subsystem, the copilot uses a sighting station to control and direct machinegun fire. When the copilot has released the sighting station switches, machinegun mounts return to the stow position of zero azimuth and zero elevation. The machineguns may then be fired from the appropriate switch on either cyclic stick, with the helicopter being maneuvered to aim the guns. When rocket fire is desired, the pilot selects the number of rocket pairs to be fired, sights the target through the infinity reflex sight, and maneuvers the helicopter to aim the rockets. Rockets are fired from a switch on the cyclic stick. Machinegun and rocket firing circuits are interconnected so that while the rocket firing switch is depressed, machinegun firing circuits are interrupted.

Differences among models:

LAUNCHER, ROCKET: airborne, 2.75-inch FFAR, XM157 is a seven-tube nonrepairable launcher with a fixed hook-type firing contact imbedded at the rear of each tube. Launcher XM157 has a smooth cylindrical outer tube cover and is loaded from the front. LAUNCHER, ROCKET, AIRCRAFT: 2.75-inch, XM158 is a seven-tube repairable launcher with a swing-away firing contact secured to the outer surface of each tube. There is no overall tube cover; tubes are painted for protection and are bound together at the suspension lugs by front and rear sets of straps. The launcher is loaded from the rear.

Data plate location:

Data plates are attached to the back of each mount assembly, to the left-front side of the rocket launcher XM157, to the front hard point of the rocket launcher XM158, to the sighting station just under the sunshade, to the body of the control box panel, to the sight XM60, and to the sight mount.

Classification

CHARACTERISTICS

Armament subsystem:

Weight (w/machineguns and rocket launchers, w/o ammunition)	(approx) 388 lb
Launcher elevation limit	+88.9 mils
Launcher depression limit	—88.9 mils

---

* Characteristics and data will be added at a later date.

AMMUNITION

7.62-mm	capacity 6,000 rds
Types	ball, AP, tracer, dummy
2.75-inch rockets	capacity 14 rockets
Types	HE, practice, inert

PERFORMANCE

Rate of fire (machineguns)	2,200 rds per min
Rate of fire (rockets)	six pairs per second

EQUIPMENT

Basic Issue Items: See TM 9–1090–201–12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9–1090–201–12, TM 9–1090–201–35, TM 9–1090–201–ESC, TM 55–1520–211–10.

SECTION 9

MISCELLANEOUS WEAPONS AND EQUIPMENT

(CLASS 1095)

(Includes pyrotechnic pistol, hand pyrotechnic and ground signal projectors, and bayonet and bayonet-knife scabbards.)

Page

PISTOL, PYROTECHNIC: AN-M8, W/MOUNT: pyrotechnic pistol, M1 9-2

PROJECTOR, PYROTECHNIC, HAND: M9 9-3

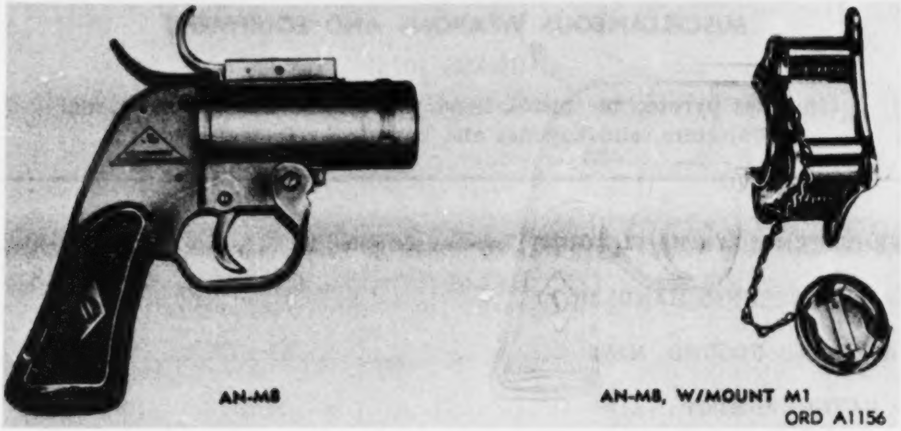
PROJECTOR, SIGNAL, GROUND: M1A1 9-4

SCABBARD, BAYONET: M1917 9-5

SCABBARD, BAYONET-KNIFE: M8 and M8A1 9-6

SIMULATOR, MACHINEGUN FIRE, CAL. .30 (ORD No. 8429609) and SIMULATOR, RIFLE FIRE: CAL. .30 (ORD No. 8429307) 9-7

PISTOL, PYROTECHNIC: AN-M8, W/MOUNT: PYROTECHNIC PISTOL, M1



Major Item

Model	*Line item No.*	*Federal stock No.*
AN-M8	4-29300-00	1095-726-5820
AN-M8 with mount M1	4-29310-00	1095-726-5657

General

PISTOL, PYROTECHNIC: AN-M8, is a double-action, single-loading pistol used for projecting flares or signaling between troops, from ground troops to aircraft, from aircraft to aircraft, or from aircraft to ground troops. MOUNT: pyrotechnic pistol, M1, is used only when signaling from aircraft and is attached to the fuselage. The pistol is retained in the mount by lugs on the muzzle end of the barrel. Flares or signals may be loaded into the pistol from either the muzzle or breech end.

Differences among models

Data plate location

Data are located on right-hand side plate of pistol.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight of pistol	2 lb, 2 oz
Weight of mount	1 lb, 2 oz
Overall length of pistol	8 in.
Overall length of pistol and mount assembled	9 15/16 in.
Length of barrel	4⅛ in.
Diameter of bore	1⅞ in.
Operation	manual
Cooling	air
Trigger pull	5 to 8 lb

AMMUNITION

Types	FLARE, AIRCRAFT: parachute, M9A1; SIMULATOR, PROJECTILE AIRBURST: M74 and M74A1; SIGNAL, ILLUMINATION, AIRCRAFT: double star (green-green, green-yellow, red-green, red-red, red-yellow, yellow-yellow), single star (green, red, yellow), green tracer (green-red star, red-red star), red tracer (green-green star, green-red star, red-red star), yellow tracer (red-yellow star), night drift.

PERFORMANCE

Maximum range:

FLARE, AIRCRAFT: M9A1	80 ft (projected from airplane in flight)
SIMULATOR, PROJECTILE, AIRBURST: M74 (45° elevation)	100 ft (height of burst above ground)
SIGNAL, ILLUMINATION, AIRCRAFT (all models)	(approx) 250 ft altitude

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 25 pistols and mounts per wood box (VCI pack).

Length	3 ft, 9⅝ in.
Width	1 ft, 11 in.
Height	1 ft, ½ in.
Volume	7.6 cu ft
Gross weight	148 lb
Ship tons	0.19

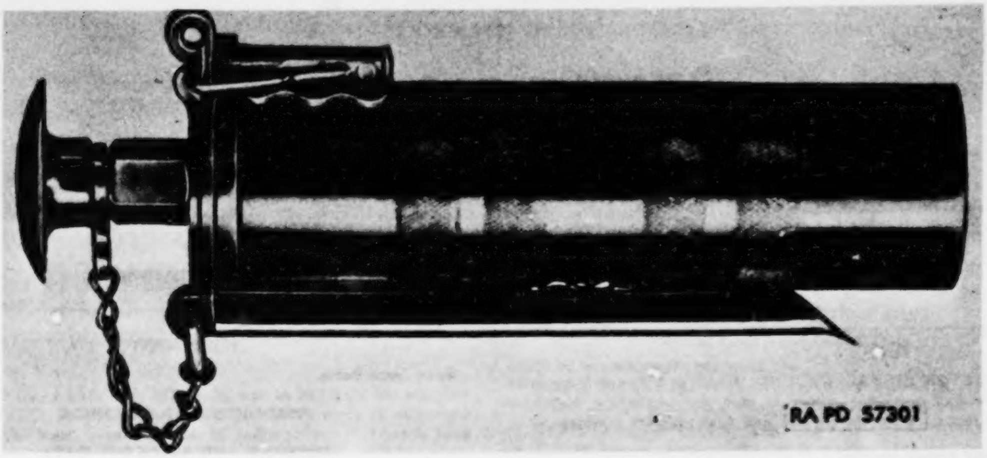
Outside Continental United States

Shipped 10 pistols and mounts per wood box (VCI pack).

Length	2 ft, ½ in.
Width	1 ft, 8 in.
Height	1 ft, ½ in.
Volume	3.6 cu ft
Gross weight	60 lb
Ship tons	0.09

References: TM 9-1290, TM 9-2018, TM 9-2205, TM 9-1095-201-25P.

PROJECTOR, PYROTECHNIC, HAND: M9



Model	*Major item* *Line item No.*	*Federal stock No.*
M9	------------------------------------	1095-726-5668

General

PROJECTOR, PYROTECHNIC, HAND: M9, is a manually-operated, muzzle-loading projector used for projecting flares or signals for signaling between ground troops or from ground troop to aircraft. This projector has no trigger and is fired by striking the rounded base of the hand knob against the hand or the ground.

Differences among models

Data plate location

The name and model number of the projector are stamped in the breech plate.

Classification: Limited standard (OTCM 37119).

CHARACTERISTICS

Weight	1 lb
Length overall	8 in.
Length of barrel	6 in.
Diameter of bore	1$\frac{9}{16}$ in.
Operation	manual
Cooling	air

AMMUNITION

Types --------SIGNAL, ILLUMINATION, AIRCRAFT: double star (green-green, green-yellow, red-green, red-red, red-yellow, yellow-yellow), single star (green, red, yellow), green tracer (green-red star, red-red star), red tracer (green-green star, green-red star, red-red star), yellow tracer (red-yellow star), night drift.

PERFORMANCE

Maximum range:
SIGNAL, ILLUMINATION, AIRCRAFT
(all models) ------------------------(approx) 250 ft altitude

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 80 projectors per wood box (VCI pack).

Length	3 ft, 2 in.
Width	1 ft, 5½ in.
Height	1 ft, 3 in.
Volume	5.8 cu ft
Gross weight	146 lb
Ship tons	0.15

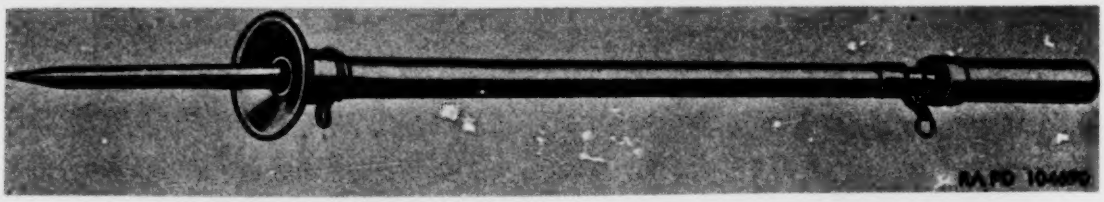
Outside Continental United States

Shipped 40 projectors per wood box (VCI pack).

Length	1 ft, 8⅝ in.
Width	1 ft, 5½ in.
Height	1 ft, 3 in.
Volume	3.2 cu ft
Gross weight	76 lb
Ship tons	0.08

References: TM 9-1290, TM 9-2018, TM 9-2205, TM 9-1095-201-25P.

PROJECTOR, SIGNAL, GROUND: M1A1



Major item

Model	*Line item No.*	*Federal stock No.*
M1A1	4-81210-10	1095-731-2570

General

PROJECTOR, SIGNAL, GROUND: M1A1, is a manually-operated, muzzle-loading projector which is used for projecting high-burst ranging signals from the ground and field artillery training.

Differences among models

Data plate location

This projector has no name, serial number, caution, or instruction plates affixed to it or stamped in it.

Classification: Limited standard (OTCM 37119).

CHARACTERISTICS

Weight (w/body assy)	12 lb, 11 oz
Length:	
Overall	4 ft, 9½ in.
(w/o body assy and spike)	1 ft, 3¾ in.
(w/body assy w/o spike)	4 ft, 1 in.
Barrel	11⅝ in.
Diameter of bore	1.636 in.
Control	lanyard
Operation	manual
Cooling	air

AMMUNITION

Type	SIMULATOR, PROJECTILE AIRBURST: M27

PERFORMANCE

Maximum range (approx)	650 ft altitude

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 projectors per wood box (VCI pack).

Length	4 ft, 6½ in.
Width	1 ft, 5½ in.
Height	1 ft, ½ in.
Volume	6.9 cu ft
Gross weight	140 lb
Ship tons	0.17

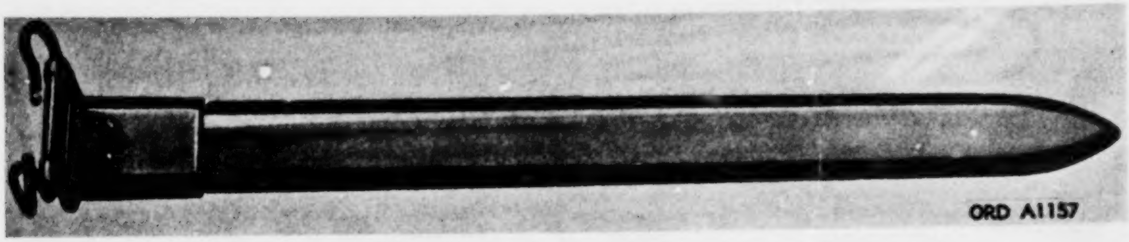
Outside Continental United States

Shipped 2 projectors per wood box (VCI pack).

Length	4 ft, 6½ in.
Width	1 ft, ½ in.
Height	7 in.
Volume	2.8 cu ft
Gross weight	65 lb
Ship tons	0.07

References: TM 9-1290, TM 9-2018, TM 9-2205, TM 9-1095-201-25P.

SCABBARD, BAYONET: M1917



ORD A1157

Secondary item

Model	*Line item No.*	*Federal stock No.*
M1917		1095-726-5706

General

SCABBARD, BAYONET: M1917, is used to facilitate the carrying of BAYONET: M1917*, when not in use. It is made of olive-drab plastic with steel trimming and is designed for a 17-inch long blade.

Differences among models

Data plate location

Classification: Limited standard (OTCM 37119).

CHARACTERISTICS

Weight	
Length overall	approx 18¼ in.
Width	$1\frac{11}{16}$ in.

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 200 scabbards per wood box.

Length	3 ft, 8½ in.
Width	1 ft, 9¼ in.
Height	1 ft, 5¼ in.
Volume	9.5 cu ft
Gross weight	148 lb
Ship tons	0.24

Outside Continental United States

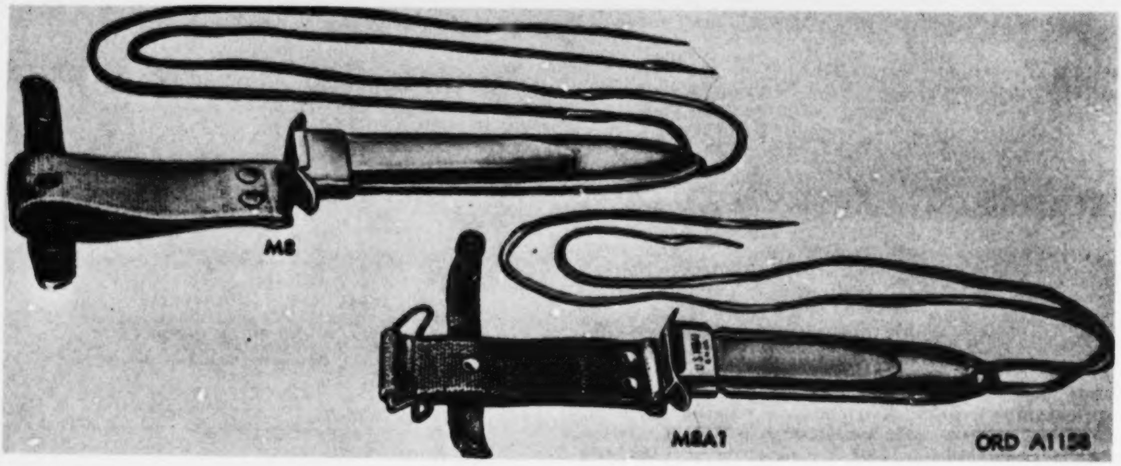
Shipped 50 scabbards per wood box.

Length	1 ft, 10⅝ in.
Width	1 ft, 5¼ in.
Height	1 ft, ¼ in.
Volume	2.8 cu ft
Gross weight	60 lb
Ship tons	0.07

References: SNL B-8, TM 9-2205.

* For characteristics and data, see item in section 2.

SCABBARD, BAYONET-KNIFE: M8 AND M8A1



Model	*Secondary item Line item No.*	*Federal stock No.*
M8		1095–726–5709
M8A1		1095–508–0339

General

SCABBARD, BAYONET-KNIFE: M8 and M8A1 are used to facilitate the carrying of BAYONET-KNIFE: M4, M5, M5A1, and M6*. They have a strap which is snapped around the grip of the knife. They are also provided with a leather thong by means of which the point of the scabbard may be tied to the leg of the wearer when the scabbard is worn on the belt. The scabbards are made of olive-drab webbing and plastic with metal trimming and are designed for a 6¾-inch blade.

Differences among models

The scabbard M8 has a belt strap without a double hook. The scabbard M8A1 has a belt strap assembly which contains a double hook for fastening it to a cartridge belt.

Data plate location

The model number of the scabbard is stamped on the outer ferrule.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight:	
M8	
M8A1	
Length overall:	
M8	
M8A1	approx 13½ in.
Width	approx 1⅝ in.

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

For Graphic Training Aids and Devices, see DA Pam 310–5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 200 bayonet-knives per wood box (VCI pack).

Length	4 ft, 1½ in.
Width	1 ft, 5⅝ in.
Height	1 ft, 4 in.
Volume	8.2 cu ft
Gross weight	145 lb
Ship tons	0.21

Outside Continental United States

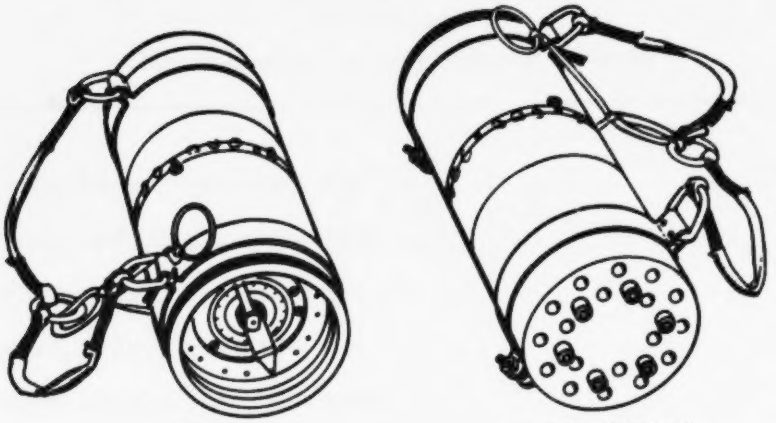
Shipped 100 bayonet-knives per wood box (VCI pack).

Length	2 ft, 2½ in.
Width	1 ft, 5⅝ in.
Height	1 ft, 4 in.
Volume	4.4 cu ft
Gross weight	70 lb
Ship tons	0.11

References: SNL B–8, TM 9–2205.

* For characteristics and data, see item in section 2.

SIMULATOR, MACHINEGUN FIRE: CAL. .30 (ORD NO. 8429609) AND SIMULATOR, RIFLE FIRE: CAL. .30 (ORD NO. 8429307)



LEFT - REAR VIEW

RIGHT - FRONT VIEW

ORD F4106

Secondary item

Model	*Line item No.*	*Federal stock No.*
ORD No. 8429609		1095-022-9830
ORD No. 8429307		1095-563-0437

General

SIMULATOR, MACHINEGUN FIRE: cal. .30 (ORD No. 8429609) and SIMULATOR, RIFLE FIRE: cal. .30 (ORD No. 8429307), are weapons which fire 18 rounds of caliber .30 ammunition to simulate machinegun or rifle fire. The rounds are fired sporadically in both timing and direction. The two simulators are similar in operation with the machinegun fire simulator firing bursts of three or four shots and the rifle fire simulator firing single shots. The timer may be set to start firing up to 1 hour in 5-minute increments. The simulators are electrically operated, battery-powered units designed to be dropped from a plane. Four or five minutes after the last shot is fired, they destroy themselves.

Differences among models

The machinegun fire simulator has a timer that is set to fire three or four shots at a time while the timer in the rifle fire simulator is set to fire single shots only.

Data plate location

Classification: Limited production (OTCM

CHARACTERISTICS

Diameter	4½ in.
Length	12 in.
Weight	17 lb
Type of operation	electrical
Power	batteries (DRY)
Timer motor	4½ volt
Firing circuit	3 volt
Time-Delay	up to 60 min (in 5 min increments)
Direction of timer sweep arm	clockwise
Parachute (paper carton or canvas bag)	6 ft dia.

AMMUNITION

Cal. .30, M2 ball (only)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1095-202-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1095-202-10

SECTION 10

NUCLEAR ORDNANCE

(CLASS 1100)

(Includes atomic training warhead sections)

Page

WARHEAD SECTION, ATOMIC, TRAINING: M40 10-2

WARHEAD SECTION, ATOMIC, TRAINING: XM52 10-3

WARHEAD SECTION, ATOMIC, TRAINING: M72 10-4

WARHEAD SECTION, ATOMIC, TRAINING: M74 10-5

WARHEAD SECTION, ATOMIC, TRAINING: XM99 10-6

WARHEAD SECTION, ATOMIC, TRAINING: M40

(Illustration will be added at a later date)

Model	*Line item No.*	*Federal stock No.*
M40		

General

WARHEAD SECTION, ATOMIC, TRAINING: M40 consists of the atomic warhead to guided missile training adaptation kit case M108, which carries at its forward end a dummy static tube, and houses the training radar fuze, burst switch control dial, sequential timer, ballistic center, terminal board, rotary switch, training baroswitch, training interconnecting box, dummy battery power supply, resistors, capacitor, relays, electrical connectors and receptacles, cable assemblies, pneumatic tank and valve, and other components simulating the internal parts of the operational warhead section. The M40 trainer has the same external configuration as the operational warhead section. It is a Not-To-Be-Fired item containing inert components. These components provide an effective method of instructing operator and maintenance personnel without the necessity of using operational items, in proficiency atomic training of the LA CROSSE rocket firing batteries, in all operations pertaining to the war reserve warhead section equipment they will later use. No explosive hazard exists with the M40 trainer, but proper procedures should be observed in training, however, so that when a live unit is handled, safety will be a normal routine.

Differences among models

Data plate location

Classification

CHARACTERISTICS

(Classified)

PERFORMANCE

(Classified)

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

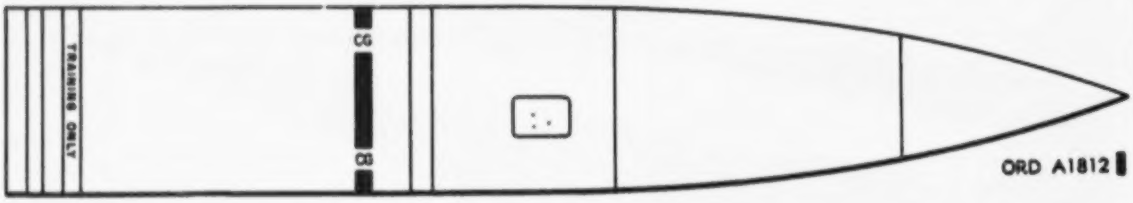
Shipped	per shipping container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	per shipping container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1100-400-85P

WARHEAD SECTION, ATOMIC, TRAINING: XM52



ORD A1812

Model	*Line item No.*	*Federal stock No.*
XM52		

General

WARHEAD SECTION, ATOMIC, TRAINING: XM52 consists of the atomic warhead to rocket training adaptation kit case XM88, which houses the atomic training warhead, timer, simulator and components designed to simulate the internal parts of an operational warhead section and give the same indications during electrical test as would be received from the operational adaptation kit. These components provide an effective method of instructing operator and maintenance personnel without the necessity of using operational items in proficiency atomic training of the LITTLE JOHN rocket firing batteries, in all operations pertaining to the war reserve warhead section equipment they will later use. A jumper in the warhead connector provides the same test indications as a warhead in an operational warhead section. The XM52 trainer has the same external configuration as the operational warhead section. No explosive hazard exists with the XM52 warhead section. Proper procedures should be observed in training, however, so that when a live unit is handled, safety will be a normal routine.

Differences among models

Data plate location

The identification data are stenciled with white stencil ink, and "TRAINING ONLY" with red stencil ink on the outside surface of the trainer case structure.

Classification

CHARACTERISTICS

(Classified)

PERFORMANCE

(Classified)

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

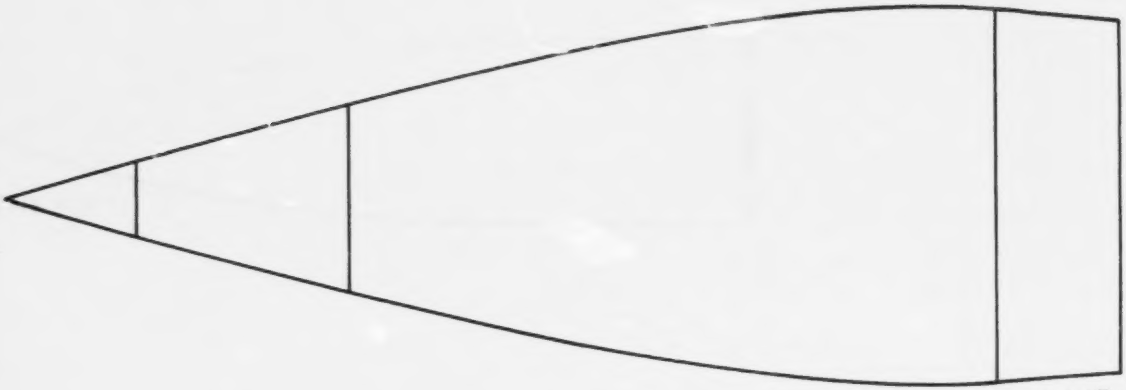
Shipped per shipping container
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped per shipping container
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-1100-212-12, TM 9-1100-212-35, TM 9-1100-212-35P

WARHEAD SECTION, ATOMIC, TRAINING: M72



ORD A1813

Model	*Line item No.*	*Federal stock No.*
M72	....	1105-689-1006

General

WARHEAD SECTION, ATOMIC, TRAINING: M72 consists of the atomic warhead to rocket training adaptation kit case, which houses the atomic training warhead, the selector, ballistic, digital read-out, and pressure checkout assemblies, adaptation kit subassembly, and timer. The M72 trainer is a Not-To-Be-Fired training aid, designed to familiarize the HONEST JOHN battalion or battery with required mating, testing and firing of the war reserve warhead section in proficiency operator and maintenance atomic training. It incorporates dummy componets, is similar to the war reserve warhead section in size, shape, weight, center of gravity and all external controls, connections, and features, and simulates the functions and electrical indications of the war reserve warhead section, when used for mating and testing. Prefire testing of the M72 warhead section requires no external test equipment, as it contains a hand-powered generator which furnishes power for test purposes. The test circuits furnish a GO-NO GO type indication by the illumination of lamps. A switch allows the instructor to simulate a GO-NO GO indication, in training. The M72 trainer has been made rugged to afford continual assembly, disassembly, and checkout. It does not contain any nuclear, explosive, or radioactive components. The same, normal, handling procedures as prescribed for the war reserve warhead sections should be exercised, however, in training, since one purpose of this training aid is to familiarise the trainee with the handling care required of the war reserve warhead sections.

Differences among models

Data plate location

The identification data are stenciled with white stencil ink, and "TRAINING ONLY" with red stencil ink on the outside surface of the trainer case structure.

Classification: Standard A (OTCM 37412)

CHARACTERISTICS

(Classified)

PERFORMANCE

(Classified)

EQUIPMENT

Basic Issue Items: See TM 9-1100-200-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

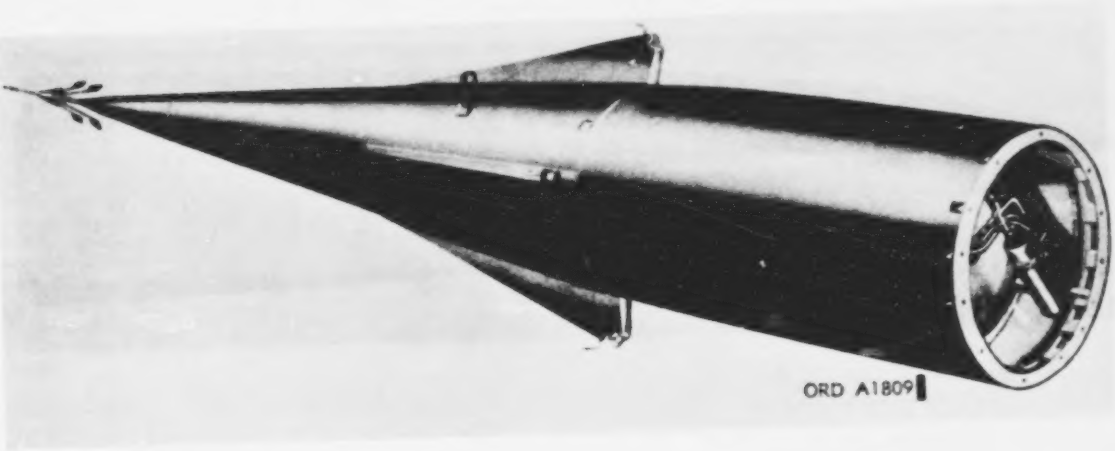
Shipped per shipping container
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped per shipping container
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-1100-200-12, TM 9-1100-200-20P, TM 9N-1100-200-12.

WARHEAD SECTION, ATOMIC, TRAINING: M74



Model	*Line item No.*	*Federal stock No.*
M74		1105-831-6015

General

WARHEAD SECTION, ATOMIC, TRAINING: M74 consists of a warhead section and a forward body section carrying at its forward end a self-alining static tube (Static probe). The warhead section is fabricated of sheet steel and houses the cartridge assembly, cables, pneumatic system, and dummy warhead with concrete ballasts, and is equipped with an instructor's control panel. This panel is not incorporated in war reserve materiel and is used in training to induce the malfunctions (in the cartridge assembly, warhead, and missile cable circuits) that can be detected by the test set and the launcher control indicator, and to regulate cartridge and warhead pneumatic pressure. The forward body section is a sheet steel unit and incorporates the dummy "transponder" control group. The forward self-alining static tube (static probe) consists of a steel static tube probe, a plastic vane and body assembly, aft yoke and collar which facilitates assembly of static tube to forward body section. To prevent use on war reserve materiel, the O-ring end of the static tube is substantially oversized so that it will not mate to a war reserve forward body section. The M74 trainer is a Not-To-Be-Fired training item containing inert components which simulate the war reserve items. It is designed to provide proficiency training and testing of operator and maintenance personnel of a NIKE-HERCULES battery in the operations pertaining to the war reserve warhead section. The M74 warhead section simulates the war reserve warhead section physically, and conforms to the required weight, center of gravity, external and internal configurations, and its internal circuits provide the same electrical responses as war reserve materiel. All Safety Procedures for war reserve must be complied with in training, to familiarize the personnel thoroughly in war reserve safety requirements. The M74 trainer is used in performing disarm procedures simulating the war reserve item.

Differences among models

Differences within M74 trainers: M74 trainers serial numbered from 1 through 134 use "baro" simulators with terminal boards in the cartridge assembly and a "prony brake" system in conjunction with the servo mechanisms. Those serial-numbered from 135 on use "baro" simulators with connectors, instead of terminal boards in the cartridge assembly, and use a resistor to replace the "prony brake".

Data plate location

The identification data are stenciled with white stencil ink, and "TRAINING ONLY" with red stencil ink on both sides of the warhead section and the forward body section.

Classification: Limited production (OTCM 37380)

CHARACTERISTICS

(Classified)

PERFORMANCE

(Classified)

EQUIPMENT

Basic Issue Items: See TM 9-1100-251-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

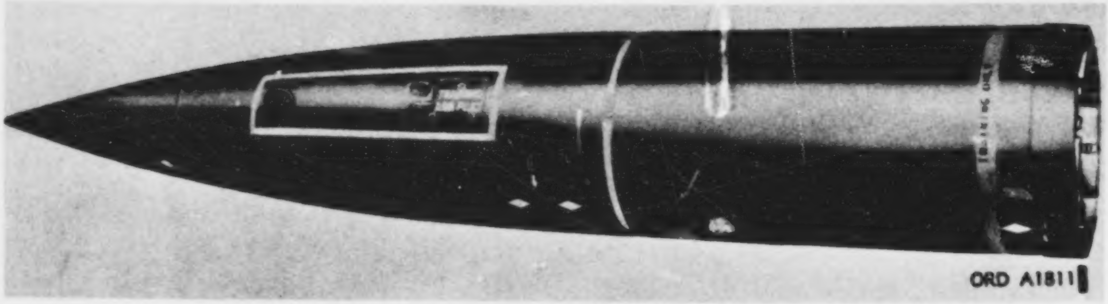
Shipped	per shipping container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	per shipping container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1100-251-12, TM 9-1100-251-20P, TM 9-1100-251-35, TM 9-1100-251-35P.

WARHEAD SECTION, ATOMIC, TRAINING: XM99


ORD A1811

Model	*Line item No.*	*Federal stock No.*
XM99	....	1105-846-7423

General

WARHEAD SECTION, ATOMIC, TRAINING: XM99 consists of the atomic warhead to rocket training adaptation kit case XM88, which houses the test panel, height of burst selector switch, timer, safe plate and arm plug, simulated locking ring, and other components simulating the internal parts of the operational warhead section. The safe plate and arm plug is designed to prevent interchangeability with the safe plate and arm plug used with an operational warhead section. The XM99 trainer has the same external configuration, weight, and balance and is designed to simulate the operational warhead section for operator and maintenance training of the LITTLE JOHN rocket firing batteries in all operations pertaining to the war reserve warhead section equipment they will later use. Simulating components are used within the training adaptation kit XM88 to give the same indications during electrical test as would be received from the operational adaptation kit. Prefire checkout and fuze setting are performed in the same manner as with an operational warhead section. The height of burst selector switch is purely mechanical, to simulate the various switch positions for training purposes. The XM99 trainer test panel area contains provisions for simulating continuity and timer malfunctions that can be detected by the test set, in training. The XM99 trainer can be mated to a rocket motor training device, but will not mate with an operational rocket motor. No explosive hazard exists with the XM99 trainer, but proper procedures should be observed in training, however, so that when a live unit is handled, safety will be a normal routine.

Differences among models

Data plate location

The identification data are stenciled with white stencil ink, and "TRAINING ONLY" with red stencil ink on the outside surface of the trainer case structure.

Classification

CHARACTERISTICS

(Classified)

PERFORMANCE

(Classified)

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per shipping container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	per shipping container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1100-212-12, TM 9-1100-212-20P, TM 9-1100-212-35, TM 9-1100-212-35P.

SECTION 11

FIRE CONTROL DIRECTORS
(CLASS 1210)

DIRECTOR: M15 (T41E2)

For data and characteristics, see FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) (Section 13).

SECTION 12

FIRE CONTROL COMPUTING SIGHTS AND DEVICES
(CLASS 1220)

(Includes ballistics computers; ballistics drives; computing sights; graphical firing scales; graphical firing fan tables; plotting boards; and slide rule).

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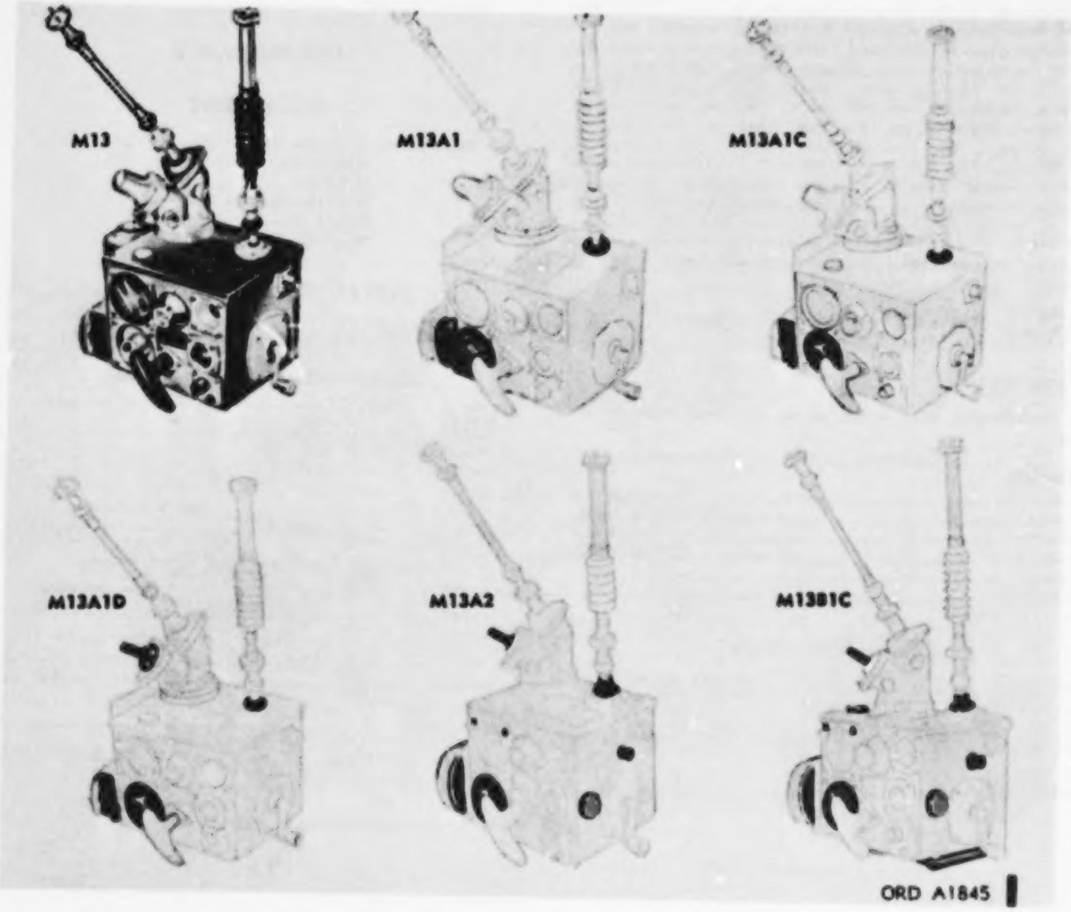
COMPUTER, BALLISTICS: M13 (T31), M13A1 (T31E1), M13A1C, M13A1D, M13A2, and M13B1C



ORD A1845

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M13 (T31)		1220-344-4678
M13A1 (T31E1)		1220-546-9735
M13A1C		1220-744-9445
M13A1D		1220-676-2182
M13A2		1220-856-9454
M13B1C		1220-870-6274

General

COMPUTER, BALLISTICS: M13 (T31), M13A1 (T31E1), M13A1C, M13A1D, M13A2, and M13B1C, is an electro-mechanical device designed to compute super-elevation angles for the main gun. The ballistics computer is rigidly mounted to the turret wall on the right of the gunner. In operation the computer receives range information in the form of shaft rotation, from the range finder. This range data then is applied to the ammunition data and ballistic corrections which previously have been rendered manually into the computer by the gunner. The product is the superelevation angle which is transmitted through the ballistic drive to the periscope. The ballistic drive also transmits the same superelevation angle to the range finder.

The combat tanks that the ballistics computer are used with are: the ballistics computer M13 is used with RANGE FINDER, FIRE CONTROL: M13[*] in the TANK, COMBAT, FULL TRACKED: 90-mm gun, M48,[*] M48A1,[*] and M48C[*] and TRAINER, TANK GUNNERY: 90-mm M20;[*] the ballistics computer M13A1 is used with RANGE FINDER: M13A1[*] in the TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2[*] and the TRAINER, TANK GUNNERY: 90-mm M26;[*] the ballistics computer M13A1C is used with the RANGE FINDER, FIRE CONTROL: M17[*] in the TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2C;[*] the ballistics computer M13A1D is used with RANGE FINDER, FIRE CONTROL: M17C[*] in the TANK, COMBAT, FULL TRACKED: 105-mm gun, M60 and TRAINER, TANK GUNNERY: 105-mm gun, M30;[*] the ballistics computer M13A2 is used with RANGE FINDER, FIRE CONTROL: M17A1[*] in the TANK, COMBAT, FULL TRACKED: 105-mm gun, M60A1,[*] the ballistics computer M13B1C is used with RANGE FINDER, FIRE CONTROL: M17B1C[*] in the TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A3.[*]

Differences among models

The main differences between the six models of the ballistics computer are that M13 and M13A1 have the range scale graduated in yards, and M13A1C, M13A1D, and M13A2 have the range scale graduated in meters. M13 requires disassembly of reset bracket to remove switch, and in M13A1, M13A1C, and M13A1D the switch can be removed without disassembling the reset bracket. M13 has a one-piece seal in the plate of ammo selector shaft, M13A1 and M13A1C have two-piece seal, and M13A1D has two-piece seal and stops on the ammo selector shaft. M13 has an integral guard and cover of the circuit breaker; its ammo-selector wheel access hole housing is not drilled, it has an integral light conductor rod clip bracket of the counter assembly, and its outer dial has to be removed before removing the light ring, which has lower bracket. M13A1, M13A1C, and M13A1D have separate switch guard of circuit breaker, and have a separate light conductor rod clamp bracket of counter assembly, and their light ring has no bracket and can be removed at any time. M13, M13A1, and M13A1C have a full set and spares of superelevation cams, and their computer mount is part of the computer. M13A1D has no cant drive output shaft cover, no spare cam box, and its computer mount is part of the tank.

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[*] For characteristics and data, see items in sections 14 and 23.

The M13A2
The M13B1C } (Data will be added at a later date).

Data plate location

The identification plate is located on the front panel of the housing.

Classification:

M13	Standard B
M13A1	Standard B (OTCM 35978)
M13A1C	Standard A
M13A1D	Standard A (OTCM 37002)
M13A2	
M13B1C	

CHARACTERISTICS

Length, overall	1 ft, 2.1 in.
Height, less output and input shafting	1 ft, 2.5 in.
Depth, overall	11.1 in.
Weight, output and input shafting included	38.0 lb

Range limits:

Input from range finder M13, M13A1	500 to 4,800 yd
From computer, manual operation	0 to 4,800 yd
Input range from range finder M17, M17C	500 to 4,400 meters
From computer, manual operation	0 to 4,400 meters
Superelevation	100 mils
Range correction	±15 percent

PERFORMANCE

EQUIPMENT

Basic Issue Items: M13—See ORD 7 SNL G-254.
M13A1—See TM 9-7022.
M13A1C.
M13A1D—See TM 9-2830-215-10.
M13A2.
M13B1C—See TM 9-2830-224-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped   ballistics computers per shipping container.

Length	21¾ in.
Width	17¼ in.
Height	20½ in.
Volume	4.86 cu ft
Gross weight	85 lb
Ship tons	0.12

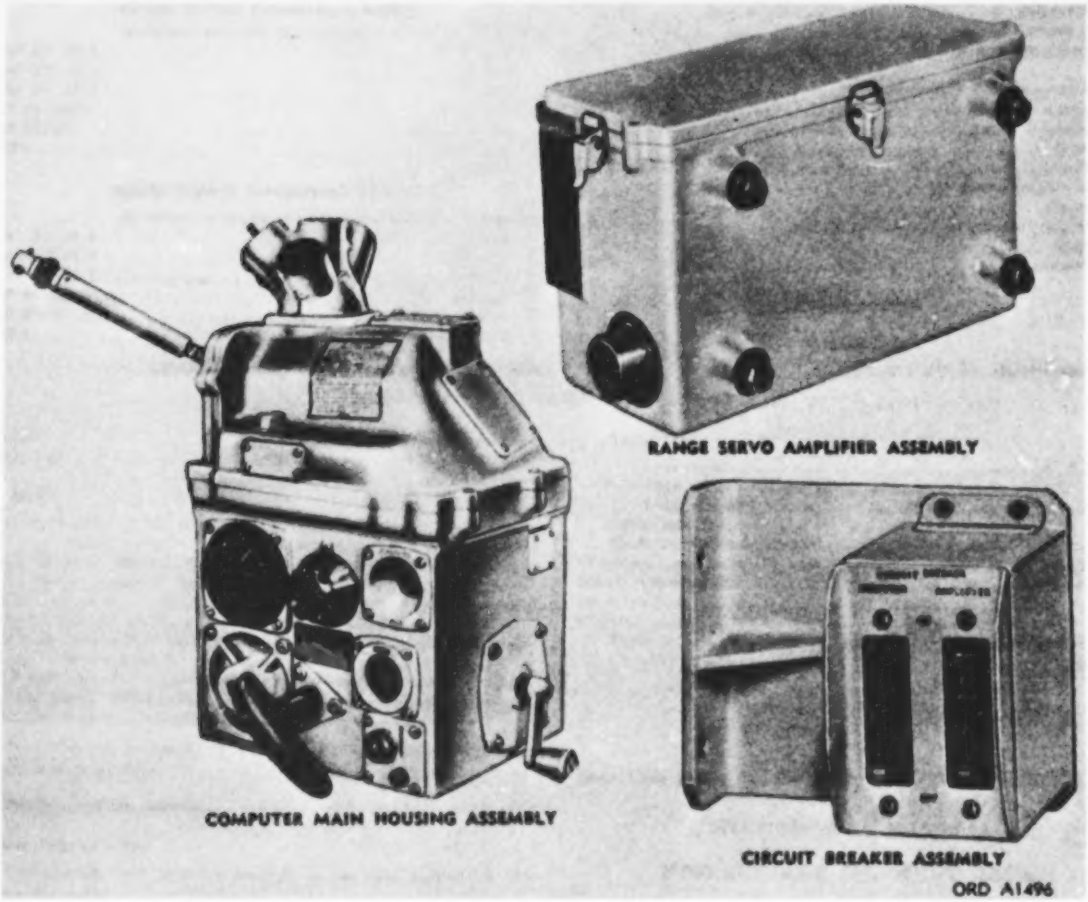
Outside Continental United States

Shipped   ballistics computers per shipping container.

Length	21¾ in.
Width	17¼ in.
Height	20½ in.
Volume	4.86 cu ft
Gross weight	85 lb
Ship tons	0.12

References: SNL F-286; TM 9-1220-203-34, TM 9-1220-203-35P, TM 9-1220-203-50.

COMPUTER, BALLISTICS: M14 (T33)


RANGE SERVO AMPLIFIER ASSEMBLY
COMPUTER MAIN HOUSING ASSEMBLY
CIRCUIT BREAKER ASSEMBLY
ORD A1496

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M14		1220-622-4934

General

COMPUTER, BALLISTICS: M14 is used with TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1. The computer consists of a computer main housing assembly, range servo amplifier assembly, and circuit breaker assembly. The computer receives range data by a synchro transmitting system from the range finder. The computer then applies ammunition data and any required ballistic corrections. Both ammunition data and ballistics corrections are introduced manually into the computer. The product is the superelevation angle (elevation above the line-of-sight) required for the particular ammunition being fired at the measured range. This superelevation data is then transmitted from the computer by four mechanical and one electrical output to the periscope, the superelevation signal generator, superelevation transmitter, cant corrector, and range finder cant corrector.

Differences among models

Data plate location

The identification plate (nameplate) for the ballistics computer is located on the computer main housing assembly. The identification plate for the range servo amplifier assembly is located on the range servo amplifier housing.

Classification: Standard A (OTCM 36540).

CHARACTERISTICS

Computer main housing assembly:

Length	1 ft
Height	1 ft, 7 in.
Depth	
Weight	70 lb

Range limits:	
Input from range finder	500 yd to 5,000 yd
Output from computer	0 yd to 4,800 yd
Superelevation	70 mil
Range correction	± 15%
Electrical operating voltage	24± 6 v dc, 115 ± 11.5 vac, 400 + 40 cps
Range servo amplifier assembly:	
Length	9¼ in.
Height	8 in.
Depth	5 9/16 in.
Weight	12 lb
Circuit breaker assembly:	
Length	6¼ in.
Height	5⅛ in.
Depth	5⅝ in.
Weight	5 lb

PERFORMANCE

EQUIPMENT

Basic Issue Item: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 ballistics computer per shipping container

Length	2 ft, 2½ in.
Width	1 ft, 8¼ in.
Height	2 ft, 1¼ in.
Volume	7.925 cu ft
Gross weight	117.92 lb
Ship tons	0.25

Outside Continental United States

Shipped 1 ballistics computer per shipping container

Length	2 ft, 2½ in.
Width	1 ft, 8¼ in.
Height	2 ft, 1¼ in.
Volume	7.925 cu ft
Gross weight	117.92 lb
Ship tons	0.25

References: TM 9-1220-207-35, TM 9-1220-207-35P.

COMPUTER, GUN DIRECTION, M18 W/E

ORD A2054

SHOWN: COMPUTER GUN DIRECTION M18 W/TABLE AND COVERS

Model	*Line item No.*	*Federal stock No.*
M18, w/e	4-10742-06	1220-448-0131

General

COMPUTER, GUN DIRECTION, M18 is a portable general-purpose, digital computer capable of solution of fire control problems for five selected batteries. Information on two types of weapons is preloaded into the memory of the computer. Additional information affecting the ballistics of the battery weapons may be inserted by the operator. Meteorological data may be entered by mechanical tape reader or manually through the keyboard. The computer is mounted on the gun computer table. Certain connections for power are made through electrical connectors on the table. Three-phase, 120/208 volt, 400 cycle prime power is supplied from a generator set through a cable assembly.

The computer is housed in a watertight case having removable front and rear covers.

Differences among models

Data plate location

The identification plate is located on the top portion of the computer case.

Classification: Standard A (OTCM 37683).

CHARACTERISTICS

Weight (approx):	
Computer	200 lb
Table	40 lb
Cable and reel, assy.	128 lb
Cable and bracket adapter	5 lb
Depth:	
Computer	2 ft, 10 in.
Table	2 ft, 7 in.
Width:	
Computer	2 ft, 5 in.
Table	2 ft, 4 in.
Cable and reel, assy.	11 in.
Cable and bracket adapter	4 in.
Height:	
Computer	15 in.
Table:	
Legs closed	5 in.
Legs open, retracted	1 ft, 9 in.
Legs extended	2 ft, 9 in.
Cable and reel, assy. (dia)	2 ft, 1 in.
Cable and bracket adapter	15 in.
Operating temperature range	−40° to 125° F. ambient
Input frequency	400 cps ±2 percent
Input voltage	120/208 v ±5%, 3 phase, 4 wire
Power	0.7 kw per computer mercury unit
Type	magnetic disk
Capacity	8,192 words (units)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-221-10/1.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and Outside Continental United States

Shipped 1 computer, w/table per plastic case.

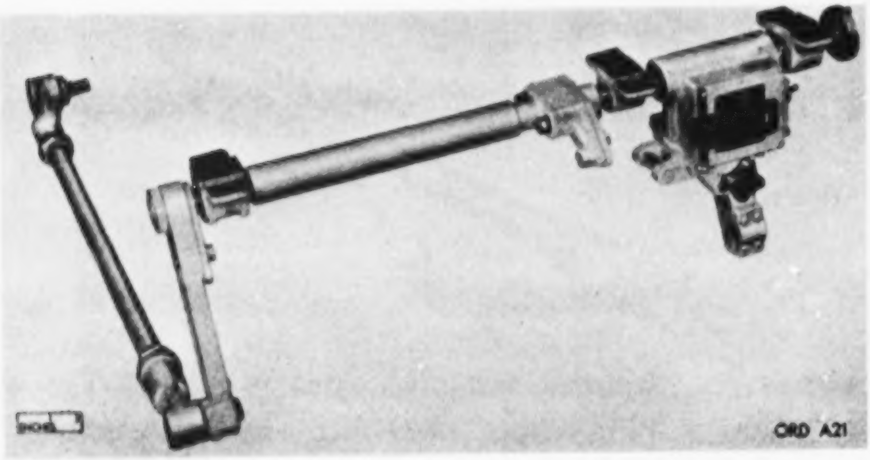
Length	41⅛ in.
Width	35¼ in.
Height	23⅛ in.
Volume	18 cu ft
Gross weight	350 lb
Ship tons	0.45

Shipped 1 cable and reel, assy per wood box.

Length	25 in.
Width	25 in.
Height	11½ in.
Volume	5 cu ft
Gross weight	157 lb
Ship tons	0.12

References: TM 9-1220-221-10/1, TM 9-1220-221-10/2, TM 9-1220-221-20/1, TM 9-1220-221-20/2, TM 9-1220-221-20P, TM 9-1220-221-34/1, TM 9-1220-221-34/2, TM 9-1220-221-34/3, TM 9-1220-221-34/4, TM 9-1220-221-34/5, TM 9-1220-221-35P.

DRIVE, BALLISTICS: M4 (T23)



Secondary item

Model	*Line item No.*	*Federal stock No.*
M4(T23)		1220-764-9132

General

DRIVE, BALLISTICS: M4 (T23) consists of a ballistic unit, a level vial, and linkage which connects the gunner's and commander's MOUNT, PERISCOPE: M93 (T176E1) and M94 (T177E2) with the gun. The ballistic drive is mounted on the turret roof above the gun and is used to introduce superelevation by varying the line-of-sight of the PERISCOPE: M20 (T35) or M20A1 to compensate for the trajectory of the projectile used as indicated on the range scale of the ballistic unit.

The ballistics drive M4 (T23) is used with the TANK, COMBAT, FULL TRACKED: 76-mm gun, M41 (T41E1) and M41A1.

Differences among models

Data plate location

Classification: Standard A (OTCM 35292).

CHARACTERISTICS

Length	2 ft. 8½ in.
Width	1 ft. 8 in.
Height	2 ft. 1⅛ in.
Weight	41 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-201-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped ballistics drives per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

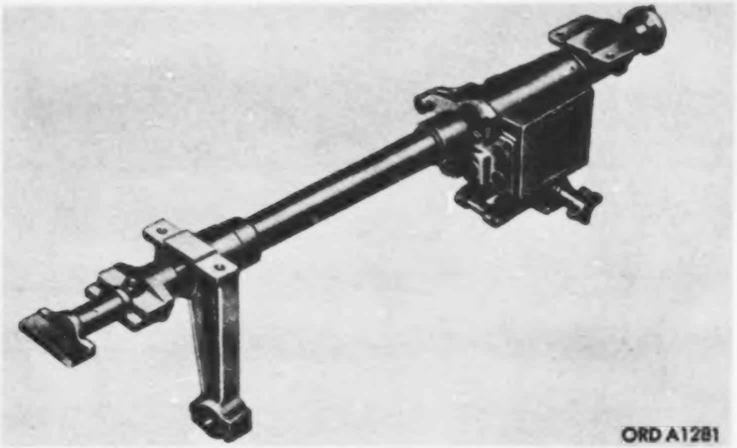
Outside Continental United States

Shipped ballistics drives per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-359, sec. 1, TM 9-6065, TM 9-2350-201-12.

DRIVE, BALLISTICS: M6 (T23E2)



ORD A1281

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M6(T23E2)		1220-764-9133

General

DRIVE, BALLISTICS: M6 (T23E2) consists of a ballistic unit with range scales, and the shafts, coupling, arm, and link that connect to the gunner's and commander's periscopes, and couple directly with the range finder. It receives superelevation data from a ballistics computer and transmits the angular value received from the position of the gun, plus superelevation data to the gunner's periscope, thereby compensating for the ballistics of the projectile. The coupling between the ballistics drive and the gunner's periscope is designed to compensate for minor misalinement of the ballistics drive relative to the periscope head while maintaining rotary motion. The ballistics drive M6 (T23E2) is attached to the turret roof by two brackets. A level vial is provided for initial alinement at zero elevation. A lamp assembly allows for use of the 24-volt vehicle power source or power from LIGHT, INSTRUMENT: M30. A range knob rotates the range scales displacing the sights the proper distance.

The ballistics drive M6 (T23E2) is used with the TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 (T43E1).

Differences among models

Data plate location

Classification: Standard B (OTCM 36117).

CHARACTERISTICS

Length	2 ft. 6½ in.
Width	6⅝ in.
Height	9¼ in.
Weight	27 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped ballistics drives per box.

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped ballistics drives per box.

Length

Width

Height

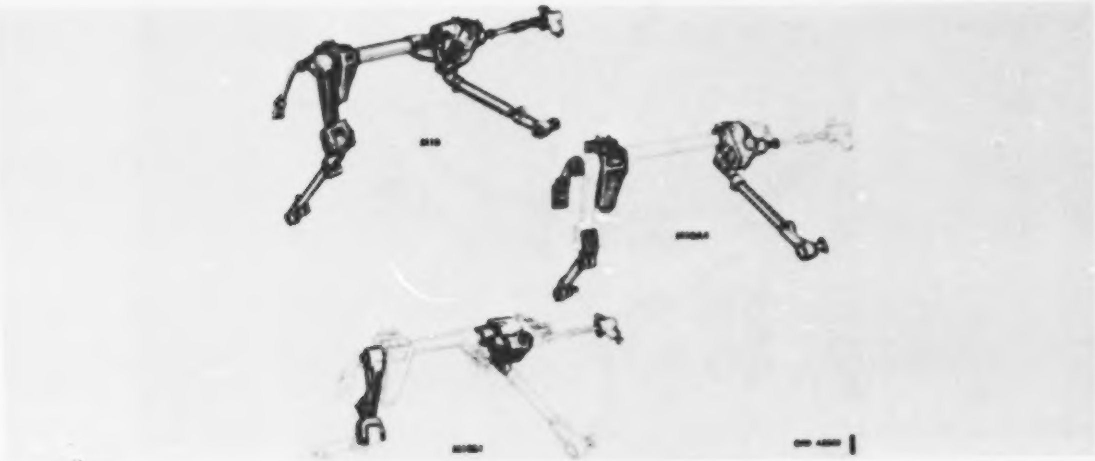
Volume

Gross weight

Ship tons

References: SNL F-359, sec. 1, TM 9-6065.

DRIVE, BALLISTICS: M10 (T24E3), M10A4, and M10B1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M10		1220-676-2184
M10A4		1220-856-9453
M10B1		1220-870-6275

General

DRIVE, BALLISTICS: M10 (T24E3) is part of the fire control system of TANK, COMBAT, FULL TRACKED: 105-mm gun, M60; the M10A4 is part of the fire control system of TANK, COMBAT, FULL TRACKED: 105-mm gun, M60A1;* the M10B1 is part of the fire control system of TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A3.*

The ballistic drive is a differential drive which converts superelevation data from the computer to the correct superelevation angle in mils and adds this angle to the gun elevation angle.

The ballistic drive is mounted to the roof by two supports, and consists of a superelevation box, junction box, cross-shaft that connects to the periscope, and linkages that connect to the gun trunnion and range finder.

The ballistic computer output shaft transmits superelevation data to the superelevation box of the ballistic drive, causing an angular displacement of the direct linkage to the range finder and coupling to the gunner's periscope, thus depressing the line-of-sight of both the range finder and gunner's periscope.

Without change in superelevation, the ballistic drive acts as a solid linkage causing equal angular movement of both the gunner's periscope and range finder corresponding to the movement of the gun in elevation or depression.

Differences among models

The ballistic drive M10 and M10B1 have a support bracket for the elevation quadrant; the M10A4 does not. The M10 and M10A4 have a level vial on the right side of the connecting arm; the M10B1 has the level vial on the left side. The M10 and M10B1 have a light assembly; the M10A4 does not. The M10A4 has a longer linkage than the M10 and M10B1. Other minor differences appear in the various assemblies.

Data plate location

The identification plate (nameplate) is located on the main housing cover of the superelevation box assembly.

Classification: M10 Standard A (OTCM 37002).
M10A4
M10B1

CHARACTERISTICS

Length (installed)	(approx) 4 ft, 7 in.
Width (installed)	(approx) 3 ft, 9 in.
Height (installed)	(approx) 2 ft, 6 in.
Weight:	
M10 and M10B1	(approx) 155 lb
M10A4	(approx) 174 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: M10—See TM 9-2350-215-10.
M10A4—See TM 9-2350-215-10.
M10B1—See TM 9-2350-224-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 ballistics drive per shipping container.

Length	46¾ in.
Width	26¼ in.
Height	20¼ in.
Volume	14.518 cu ft
Gross weight	271 lb
Ship tons	0.36

Outside Continental United States

Shipped 1 ballistics drive per shipping container.

Length	46¾ in.
Width	26¼ in.
Height	20¼ in.
Volume	14.518 cu ft
Gross weight	271 lb
Ship tons	0.36

References: TM 9-1220-220-34, TM 9-1220-220-35, TM 9-1220-220-35P.

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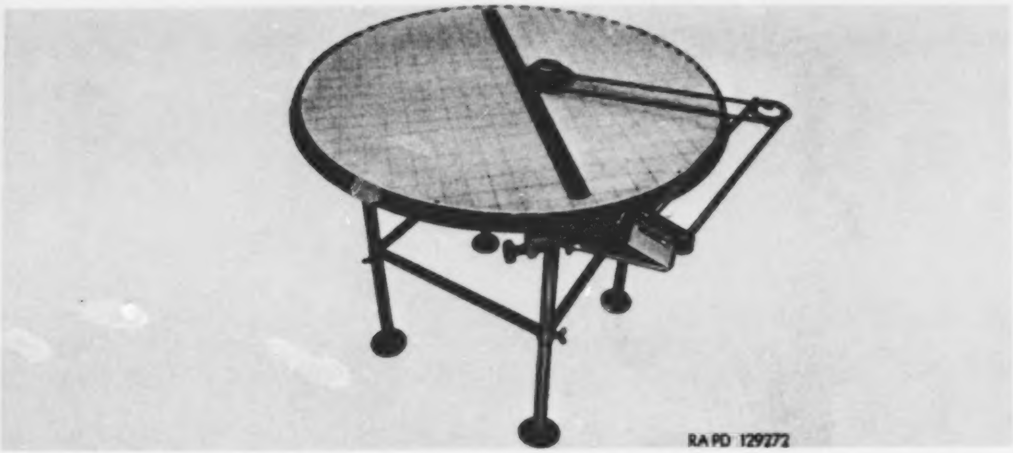
* For characteristics and data, see item in section 23.

PLOTTING BOARD: M5A2



RAPD 129272

Major Item

Model	*Line item No.*	*Federal stock No.*
M5A2, w/e	4-01520-20	1220-670-2971

General

PLOTTING BOARD: M5A2 is used by the flash ranging platoon of observation batteries of the field artillery to plot and determine the location of hostile batteries by plotting the azimuth of the flash or smoke from enemy guns, as reported from two or more observation posts. The center of impact of friendly fire also may be determined.

The plotting board plots at a standard map scale of 1/25,000 meters. The scales are graduated to match the grid.

Differences among models

Data plate location

The identification plate (nameplate) is located on the bracket of the plotting board.

Classification: Standard B (OTCM 37342).

CHARACTERISTICS

Length	(approx) 3 ft. 9 in.
Width	(approx) 3 ft. 4¾ in.
Height	(approx) 2 ft. 10¾ in.
Weight	276 lb
Range	Unlimited
Azimuth scale	0-6,400 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-233.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped plotting boards per

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped plotting boards per

Length

Width

Height

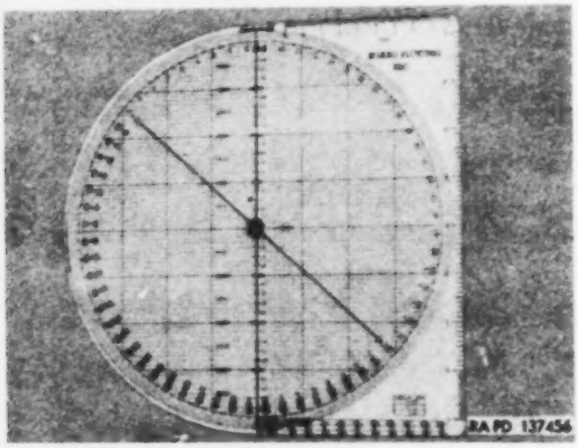
Volume

Gross weight

Ship tons

References: SNL F-233, TM 9-6109.

PLOTTING BOARD: M10



Secondary item

Model	*Line item No.*	*Federal stock No.*
M10, w/e	4-30250-10	1220-670-2976

General

PLOTTING BOARD: M10 consists of a rotatable pivoted disk of transparent plastic material attached to a flat base of white material. The top disk is roughened to take pencil marks which can be erased after the completion of a problem. Three scales and a fine line are printed on the top disk. It is used with caliber .30 machineguns, 105-mm howitzers, and 75-mm rifles, for plotting indirect fire data. Location of the gun and target, as obtained at the observation post, in terms of azimuth and distance, are plotted individually on the rotatable disk. The center of the disk represents the location of the observation post. Distance in yards and azimuth in mils of the target from the gun is read directly on the board. For operating instructions, see TM 9-575.

Differences among models

Data plate location

The item name and model number are located in the upper right-hand corner of the plotting board.

Classification: Standard B (OTCM 37601).

CHARACTERISTICS

Range scale	Grid interval depends on map scale
Azimuth scale	0 to 6,400 mils
Square of base	8⅝ in.
Diameter of disk	8½ in.
Thickness	3/32 in.
Weight	0.75 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-314.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 120 plotting boards (w/equipment) per shipping container

Length	3 ft, ⅝ in.
Width	1 ft, 11⅛ in.
Height	1 ft, 6⅛ in.
Volume	9 cu ft
Gross weight	200 lb
Ship tons	0.23

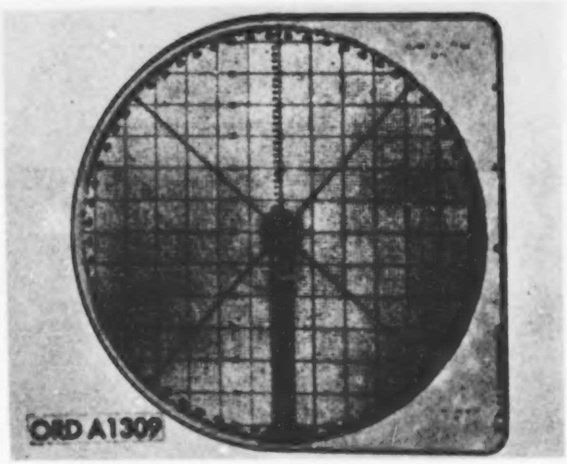
Outside Continental United States

Shipped 120 plotting boards (w/equipment) per shipping container

Length	3 ft, ⅝ in.
Width	1 ft, 11⅛ in.
Height	1 ft, 6⅛ in.
Volume	9 cu ft
Gross weight	200 lb
Ship tons	0.23

References: SNL F-314, TM 9-575.

PLOTTING BOARD: M16



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M16, w/e	4-01519	1220-602-7941

General

PLOTTING BOARD: M16 is a portable instrument used with MORTAR, INFANTRY: 81-mm, M29 and MORTAR, INFANTRY: 4.2-inch, M30 to compute the range and azimuth of a target for indirect firing of the mortar. The plotting board utilizes known range and azimuth data from the mortar to the observation post, in combination with reported data received from the post concerning the target's location with respect to the post, to geometrically compute the range and azimuth from the mortar.

Differences among models

Data plate location

The item name and model number are located in the upper right-hand corner of the plotting board.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Limits of operation:	
Azimuth	6,400 mils (unlimited)
Range	unlimited
Length	1 ft, 10 in.
Width	1 ft, 9½ in.
Thickness	⅜ in.
Weight	8 lb, 13 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-204-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 16 plotting boards per shipping container

Length	3 ft, 1 in.
Width	2 ft, ½ in.
Height	1 ft, 11⅜ in.
Volume	12.42 cu ft
Gross weight	195 lb
Ship tons	0.31

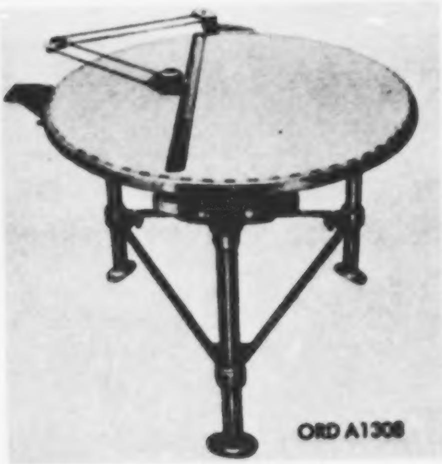
Outside Continental United States

Shipped 16 plotting boards per shipping container

Length	3 ft, 1 in.
Width	2 ft, ½ in.
Height	1 ft, 11⅜ in.
Volume	12.42 cu ft
Gross weight	195 lb
Ship tons	0.31

References: TM 9-1220-204-12, TM 9-1220-204-12P, TM 9-1220-204-35P.

PLOTTING BOARD, FLASH RANGING, FIRE CONTROL: M18 (M5A2E1)



ORD A1308

Major item

Model	*Line item No.*	*Federal stock No.*
M18	4-80300-15	

General

PLOTTING BOARD, FLASH RANGING, FIRE CONTROL: M18 is an M5 type plotting board redesigned for use as a sound ranging or flash ranging plotting board with lightweight and easier handling characteristics. It is a component of PLOTTING SET, SOUND RANGING: M58.*

Magnesium is employed for weight reduction. A three-leg support is being utilized. In addition to two-man operation, reversal of the drafting machine allows one man to operate both the vernier scale and micrometer adjustments. The gridded disk is made reversible to reduce replacement frequency when becoming too rough to use. A scale for sound ranging is designed for field addition or removal.

Differences among models

Data plate location

The identification plate (nameplate) is located on the vernier bracket assembly.

Classification: Standard A (OTCM 37342).

CHARACTERISTICS

Diameter (w/o brackets)	3 ft, 5 in.
Height	2 ft, 11½ in.
Weight	108 lb
Azimuth calibration	0 to 6,400 mils
Grid scale	40-mm = 1,000-mm

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

References:

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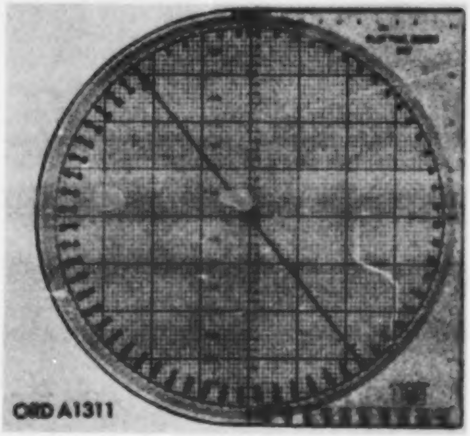
* For characteristics and data, see item in section 18.

PLOTTING BOARD, INDIRECT FIRE, FIRE CONTROL: M17, w/e



Major item

Model	*Line item No.*	*Federal stock No.*
M17, w/e	4-30250-05	1220-588-7282

General

PLOTTING BOARD, INDIRECT FIRE, FIRE CONTROL: M17 is essentially the M10 plotting board with the yard scales converted to meters and an improved pivot arrangement to provide for the easy removal of the rotatable disk from the base.

Differences among models

Data plate location

The item name and model number are located in the upper right-hand corner of the plotting board.

Classification: Standard A (OTCM 37001).

CHARACTERISTICS

Azimuth	0 to 6,400 mils
Range	no limit
Diameter	8 in.
Thickness	5/32 in.
Weight	0.75 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-223-15.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 80 plotting boards, w/e per shipping container

Length	1 ft, 11⅛ in.
Width	1 ft, 10 in.
Height	2 ft
Volume	7.18 cu ft
Gross weight	162 lb
Ship tons	0.18

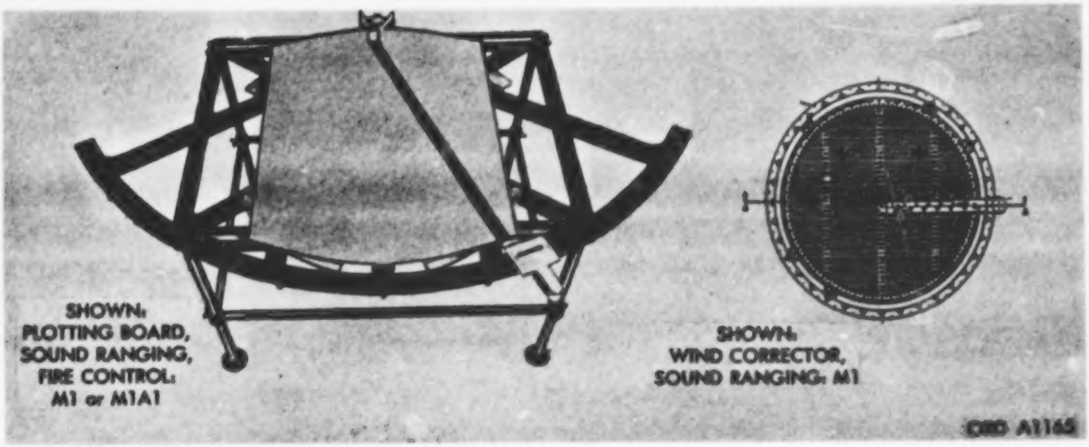
Outside Continental United States

Shipped 80 plotting boards, w/e per shipping container

Length	1 ft, 11⅛ in.
Width	1 ft, 10 in.
Height	2 ft
Volume	7.18 cu ft
Gross weight	162 lb
Ship tons	0.18

References: TM 9-1220-223-15.

PLOTTING BOARD, SOUND RANGING, FIRE CONTROL: M1 AND M1A1, AND WIND CORRECTOR, SOUND RANGING: M1


SHOWN: PLOTTING BOARD, SOUND RANGING, FIRE CONTROL: M1 or M1A1
SHOWN: WIND CORRECTOR, SOUND RANGING: M1
ORD A1165

Major item

Model	*Line item No.*	*Federal stock No.*
M1, PLOTTING BOARD, w/e	4-01538-10	1220-670-3050
M1A1, PLOTTING BOARD, w/e	4-01538-20	1220-670-3051
M1, WIND CORRECTOR, w/e	4-10954-00	1220-671-7082

General

PLOTTING BOARD, SOUND RANGING, FIRE CONTROL: M1 AND M1A1, With WIND CORRECTOR, SOUND RANGING: M1 are used for determining the location of enemy guns and for determining the changes in time differences due to the direction and velocity of the wind, respectively. They are used by field artillery.

An arm graduated in yards to a scale of 1/20,000(M1) or 1/25,000(M1A1) is pivoted about a bracket. By plotting on sound ranging plotting board M1 or M1A1 the differences in time at which the sound of the gun reaches each of several microphone stations, usually situated at equal distances along either a straight line or an arc the location of the enemy gun is determined. By plotting data relating to the sounds of bursts, this instrument can also be used for adjustments of fire of gun and howitzer batteries. The wind corrector M1 gives the time difference corrections in both value and sign, with plus and minus having the same significance as on the sound ranging plotting board M1.

Differences among models

The plotting board M1A1 is the M1 modified to plot at a scale of 1/25,000 instead of 1/20,000.

Data plate location

Classification

Plotting board M1	Standard C (OTCM 37107)
Plotting board M1A1	Standard B (OTCM 36841)
Wind corrector M1	Standard A (OTCM 37763)

CHARACTERISTICS

Sound ranging plotting board M1 or M1A1:

Range:	
M1	0–20,000 yd
M1A1	0–25,000 yd
Time-difference scale	60–0–60°
Subbase length (sound)	4, 4½, 5, 5½ sec
Microphone station radius	25, 30, 35 sec
Angle of swing, range asymptote arm	120°

Correction charts:	
Temperature	1
Asymptote	4

Sound ranging wind corrector M1:	
Wind correction scale	0–20–20–0 sec
Azimuth scale	0–6,400 mils
Wind direction scale	0–360°
Wind arm scale, wind velocity for 4 sound seconds subbase	0–30
Wind arm scale, wind velocity for 4.5 sound seconds subbase	0–30

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-154, for plotting board ORD 7 SNL F-153, for wind corrector.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Plotting board M1 or M1A1:

	Board	*Equipment*
Shipped	1	1
Length	7 ft	4 ft, 4 in.
Width	4 ft, 8 in.	3 ft, 8 in.
Height	1 ft, 8 in.	1 ft, 4 in.
Volume	54.6 cu ft	21.1 cu ft
Gross weight		
Ship tons	1.37	0.53

Wind corrector M1:

Shipped (number per box)	8
Length	2 ft, 4 in.
Width	2 ft, 2 in.
Height	7 in.
Volume	2.9 cu ft
Gross weight	82 lb
Ship tons	0.07

Outside Continental United States

Plotting board M1 or M1A1:

	Board	Equipment
Shipped		
Length		
Width		
Height		
Volume		
Gross weight		
Ship tons		

Wind corrector M1:

Shipped

Length

Width

Height

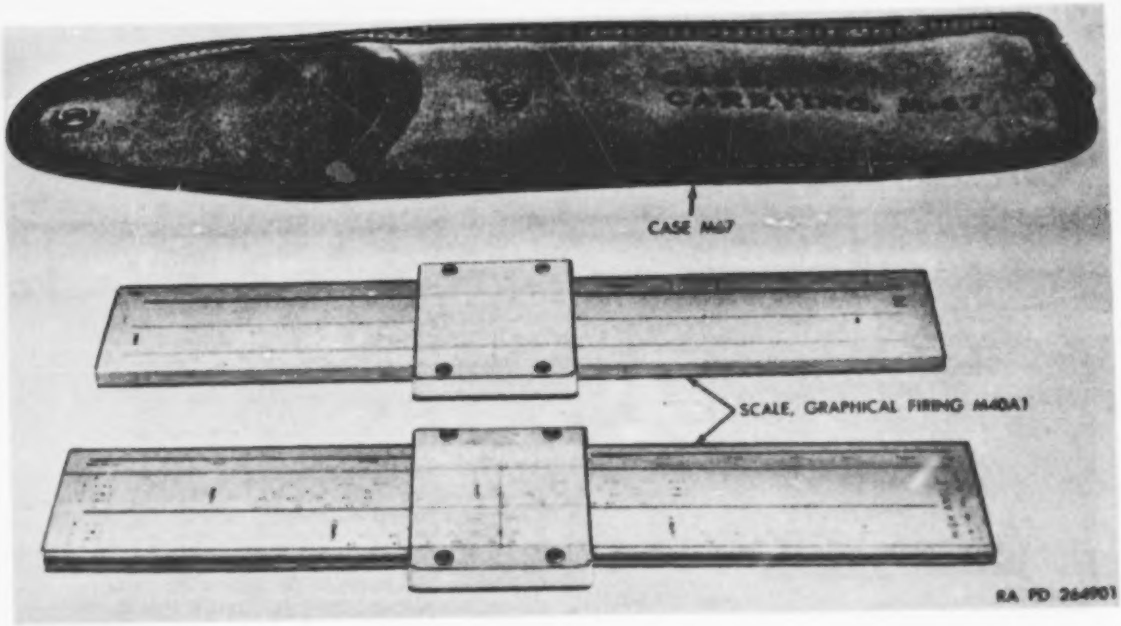
Volume

Gross weight

Ship tons

References: SNL F-153, SNL F-154; TM 9-575, TM 9-6109.

SCALE, GRAPHICAL FIRING: M40A1



Model	*Secondary item Line item No.*	*Federal stock No.*
M40A1	4-37207-15	1220-300-6504

General

SCALE, GRAPHICAL FIRING: M40A1 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules or wooden stock which bears the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "FUZE SETTING," etc., and printed ballistic data, an indicator or sliding portion, a window or frosted portion of the indicator on the under surface of which is engraved a fine hairline. A gage point is a special mark on the rule denoting a specific constant. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The graphical firing scale M40A1 is used with the CANNON, 75 MILLIMETER PACK HOWITZER: M1A1.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard C (OTCM 37255).

CHARACTERISTICS

Length	12 in.
Width	(approx) 2⅜ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped graphical firing scales per wood box.

Length
Width
Height
Volume
Gross weight
Ship tons

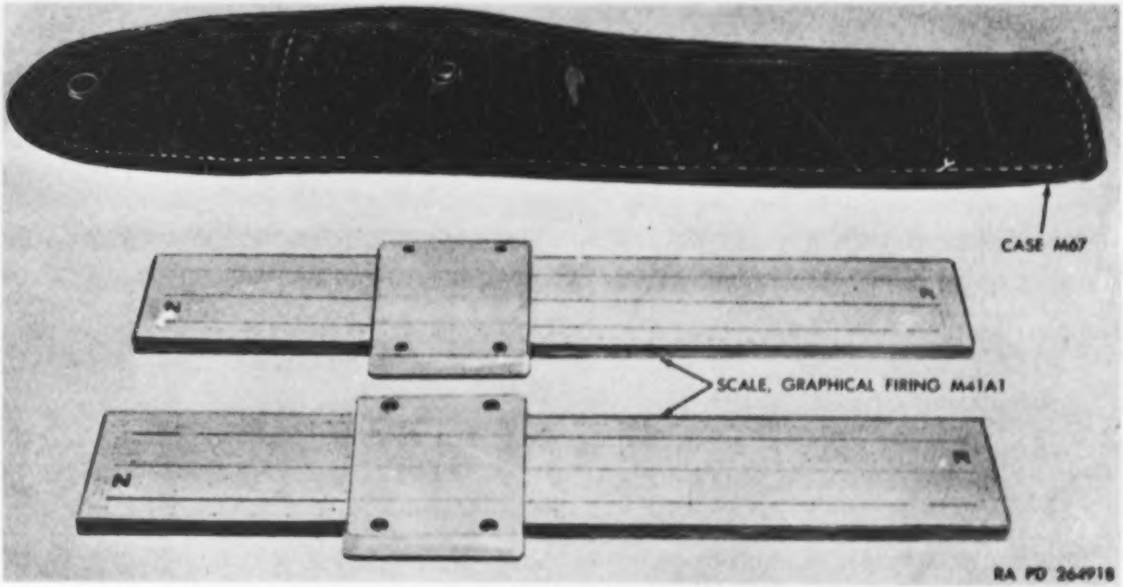
Outside Continental United States

Shipped graphical firing scales per wood box.

Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-329; TM 9-524, TM 9-1220-216-12P.

SCALE, GRAPHICAL FIRING: M41A1



RA PD 264918

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M41A1	4–87210–10	1220–300–6501

General

SCALE, GRAPHICAL FIRING: M41A1 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules or wooden stock which bears the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "FUZE SETTING," etc., and printed ballistic data, an indicator or sliding portion, a window or frosted portion of the indicator on the under surface of which is engraved a fine hairline. A gage point is a special mark on the rule denoting a specific constant. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The graphical firing scale: M41A1 is used with the CANNON, 76 MILLIMETER GUN: M32.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Length	12 in.
Width	(approx) 2⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped graphical firing scales per wood box.

Length
Width
Height
Volume
Gross weight
Ship tons

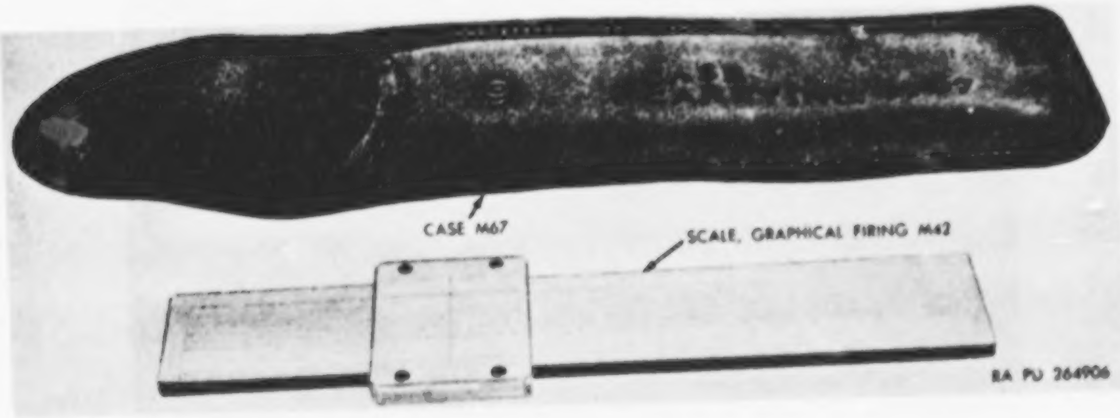
Outside Continental United States

Shipped graphical firing scales per wood box.

Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-329, TM 9-524, TM 9-1220-216-12P.

SCALE, GRAPHICAL FIRING: M42



RA PD 264906

Model	*Secondary item Line item No.*	*Federal stock No.*
M42	4-37215-25	1220-678-3059

General

SCALE, GRAPHICAL FIRING: M42 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules or wooden stock which bears the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "FUZE SETTING," etc., and printed ballistic data, an indicator or sliding portion, a window or frosted portion of the indicator on the under surface of which is engraved a fine hairline. A gage point is a special mark on the rule denoting a specific constant. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The graphical firing scale M42 is used with the CANNON, 90 MILLIMETER GUN: M36, M41 and M54.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length .... 12 in.
Width .... (approx) 2⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped graphical firing scales per wood box.

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

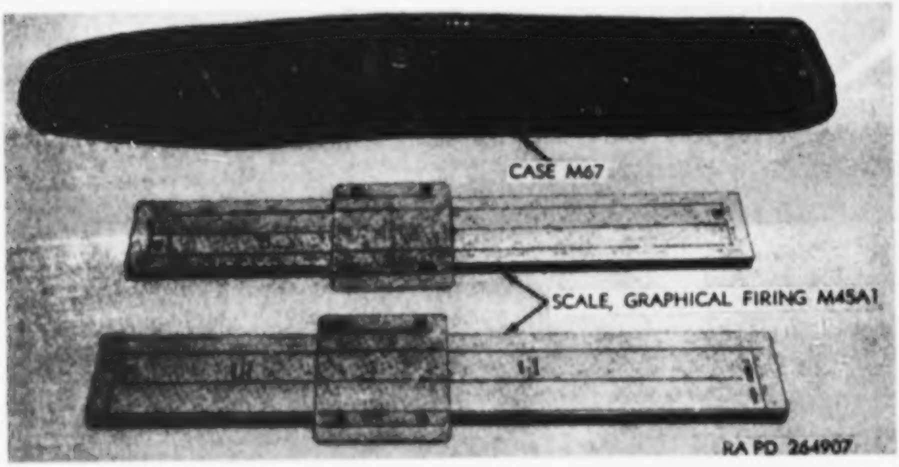
Shipped graphical firing scales per wood box.

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-329, TM 9-524, TM 9-525, TM 9-1220-216-12P.

Deleted by C 1.

SCALE, GRAPHICAL FIRING: M45A1



RA PD 264907

Model	*Secondary item* Line item No.	*Federal stock No.*
M45A1, w/e	4-37230-10	1220-335-4979

General

SCALE, GRAPHICAL FIRING: M45A1 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M45A1 graphical firing scale is graduated according to firing table FT 155–S–2 C10 and is used with CANNON, 155 MILLIMETER GUN: M2.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Length --
Width ---

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1220–216–12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

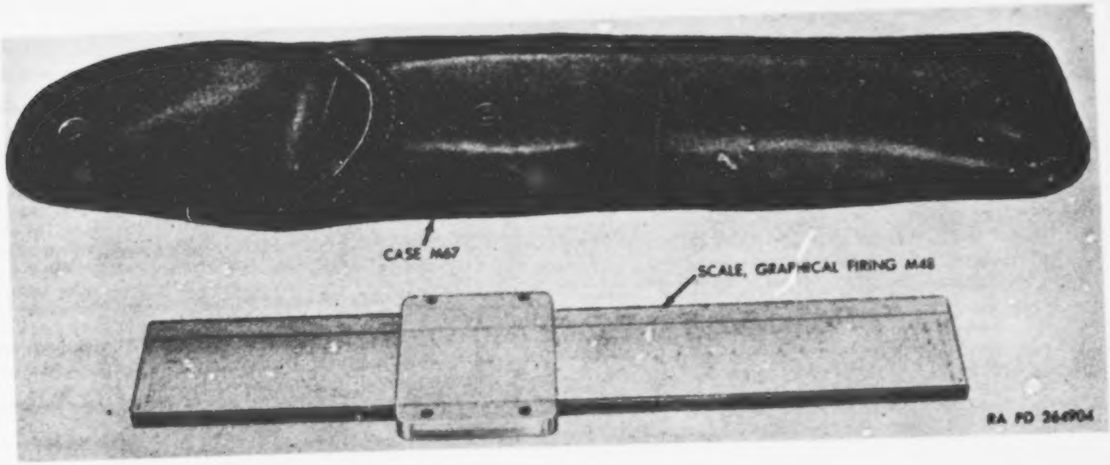
Length ------------------------------------
Width -------------------------------------
Height ------------------------------------
Volume ------------------------------------
Gross weight ------------------------------
Ship tons ---------------------------------

References: SNL F–329, TM 9–1220–216–12P.

Deleted by C 1.

Pages 12-21 and 12-22 are rescinded by C 3.

SCALE, GRAPHICAL FIRING: M48



RA PD 264904

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M48	4-87225-15	1220-678-3966

General

SCALE, GRAPHICAL FIRING: M48 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules or wooden stock which bears the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "FUZE SETTING," etc., and printed ballistic data, an indicator or sliding portion, a window or frosted portion of the indicator on the under surface of which is engraved a fine hairline. A gage point is a special mark on the rule denoting a specific constant. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The graphical firing scale M48 is used with the CANNON, 120-MILLIMETER GUN: M58.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length ....12 in.
Width ....(approx) 2⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

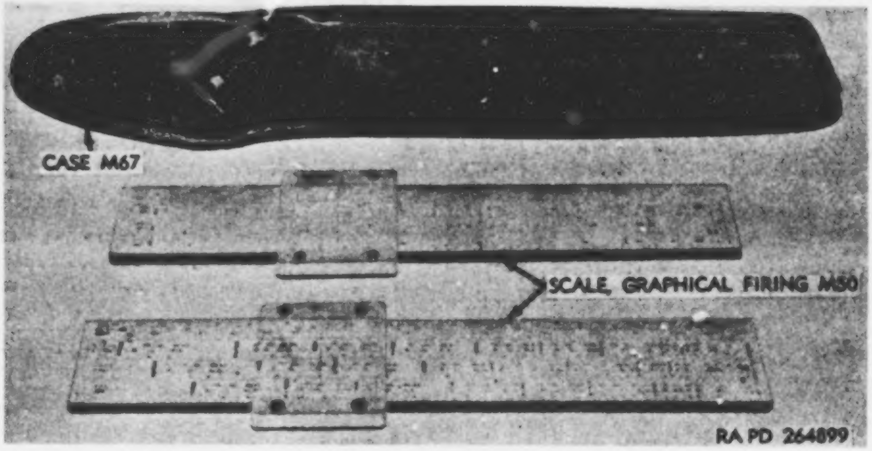
Shipped graphical firing scales per wood box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped graphical firing scales per wood box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-329, TM 9-524, TM 9-525, TM 9-1220-216-12P.

SCALE, GRAPHICAL FIRING: M50



RA PD 264899

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M50, w/e	4-37250-10	1220-678-3069

General

SCALE, GRAPHICAL FIRING: M50 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M50 graphical firing scale is graduated according to firing table FT 4.2-B-1 and is used with MORTAR, chemical, 4.2-inch, M1A1 and M2.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Length --
Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped   graphical firing scales per wood box.
  Length --
  Width --
  Height --
  Volume --
  Gross weight ----------------------------------
  Ship tons -------------------------------------

References: SNL F-329, TM 9-1220-216-12P.

Pages 12-27 and 12-28 are rescinded by C 3.

SCALE, GRAPHICAL FIRING: M60

Secondary item

Model	*Line item No.*	*Federal stock No.*
M60, w/o	4-37250-15	1220-335-4980

General

SCALE, GRAPHICAL FIRING: M60 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particlular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M60 graphical firing scale is used with MORTAR, INFANTRY: 4.2-inch, M30. It is a replacement for the M57 graphical firing table.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 36970).

CHARACTERISTICS

Length --
Width ---

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length -----------------------------------
Width ------------------------------------
Height -----------------------------------
Volume -----------------------------------
Gross weight -----------------------------
Ship tons --------------------------------

References:

SCALE, GRAPHICAL FIRING: M64

Secondary item

Model	*Line item No.*	*Federal stock No.*
M64, w/e	4-37283-15	1220-789-2985

General

SCALE, GRAPHICAL FIRING: M64 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The graphical firing scale M64 is graduated according to firing table FT 155-Q-3 and is used with CANNON, 155-MILLIMETER HOWITZER: M1A1 and HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, M44.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37418).

CHARACTERISTICS

Length --

Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SM 9-5-1200.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

Length --

Width --

Height --

Volume --

Gross weight --

Ship tons --

References: SM 9-5-1200.

SCALE, GRAPHICAL FIRING: M65

Model	*Line item No.*	*Federal stock No.*
M65, w/e	4-87245-15	1220-445-7918

General

SCALE, GRAPHICAL FIRING: M65 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The graphical firing scale M65 is used with 8-inch howitzers. It was designed to replace the graphical firing scale M47A1.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification:

CHARACTERISTICS

Length --

Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

Length --

Width --

Height --

Volume --

Gross weight ----------------------------------

Ship tons ------------------------------------

References:

SCALE, GRAPHICAL FIRING: M70

Model	*Line item No.*	*Federal stock No.*
M70, w/e	4-87288-10	1220–798–8968

General

SCALE, GRAPHICAL FIRING: M70 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M70 graphical firing scale is used with CANNON, 155-MILLIMETER HOWITZER: M1A1 and HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, M44 when PROJECTILE, 155 MILLIMETER: illuminating, M118 is used.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37508).

CHARACTERISTICS

Length --

Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SM 9–5–1200.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scale per wood box.
  Length --
  Width --
  Height --
  Volume --
  Gross weight ------------------------------------
  Ship tons ---------------------------------------

References: SM 9–5–1200.

SCALE, GRAPHICAL FIRING: M71

Model	*Line item No.*	*Federal stock No.*
M71, w/e	4-87245-10	1220-798-8969

General

SCALE, GRAPHICAL FIRING: M71 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M71 graphical firing scale is graduated according to firing table FT 8-J-3 and is used with CANNON, 8-INCH HOWITZER: M2 or M2A1 on CARRIAGE, 8-INCH HOWITZER: M1 and HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M55. It is a replacement for the M47A1 graphical firing scales.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37604).

CHARACTERISTICS

Length --
Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SM 9-5-1200.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

References: SM 9-5-1200.

SCALE, GRAPHICAL FIRING: M73

Model	*Line item No.*	*Federal stock No.*
M73, w/e	4-37257-01	1220-393-4214

General

SCALE, GRAPHICAL FIRING: M73 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designated and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M73 graphical firing scale is graduated according to firing table FTR 762-F-1 and is used with LAUNCHER, ROCKET: 762-mm, truck-mounted, M386.

Differences among models

Data plate location

Data are printed on the face of the scale.

Classification: Standard A (OTCM 37575).

CHARACTERISTICS

Length --
Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons -------------------------------------

References:

SCALE, GRAPHICAL FIRING: M74

Model	*Line item No.*	*Federal stock No.*
M74, w/e	4-87258-07	1220-863-2694

General

SCALE, GRAPHICAL FIRING: M74 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rules are plotted with reference to the "RANGE" scale.

The M74 graphical firing scale is graduated according to firing table FTR 762-D-1 and is used with LAUNCHER, ROCKET: 762-mm, M33.

Differences among models

Data plate location

Data are printed on the face of the scale.

Classification: Standard A (OTCM 37646).

CHARACTERISTICS

Length ----------
Width ----------

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

References:

SCALE, GRAPHICAL FIRING: XM75

Model	*Line item No.*	*Federal stock No.*
XM75, w/e		1220-474-5022

General

SCALE, GRAPHICAL FIRING: XM75 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "VERTICAL INTERVAL (TEMP)," etc., printed ballistic data, and a plastic indicator with matte to receive pencil markings for reference.

The XM75 graphical firing scale is used with BATTLE GROUP, LIGHTWEIGHT: 120-mm weapon system, XM28.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Classification pending.

CHARACTERISTICS

Length
Width

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SM 9-5-1200.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SM 9-5-1200.

SCALE, GRAPHICAL FIRING: XM76

Model	*Line item No.*	*Federal stock No.*
XM76, w/e		1220-474-5023

General

SCALE, GRAPHICAL FIRING: XM76 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "VERTICAL INTERVAL (TEMP)," etc., printed ballistic data, and a plastic indicator with matte to receive pencil markings for reference.

The XM76 graphical firing scale is used with BATTLE GROUP, HEAVY: 155-mm weapon system, XM29.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Classification pending.

CHARACTERISTICS

Length
Width

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SM 9-5-1200.

SCALE, GRAPHICAL FIRING: XM77

Model	*Line item No.*	*Federal stock No.*
XM77, w/e		1220-474-5025

General

SCALE, GRAPHICAL FIRING: XM77 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "VERTICAL INTERVAL (TEMP)," etc., printed ballistic data, and a plastic indicator with matte to receive pencil markings for reference.

The XM77 graphical firing scale is used with BATTLE GROUP, HEAVY: 155-mm weapon system, XM29.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Classification pending.

CHARACTERISTICS

Length
Width

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SM 9-5-1200.

SCALE, GRAPHICAL FIRING: M78

Model	*Line item No.*	*Federal stock No.*
M78, w/e	4-37260-05	1220-884-7757

General

SCALE, GRAPHICAL FIRING: M78 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M78 graphical firing scale is graduated according to firing table FTR 762-A-2 and is used with LAUNCHER, ROCKET: 762-mm, truck-mounted, M289.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37698).

CHARACTERISTICS

Length --
Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons ------------------------------------

References:

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SCALE, GRAPHICAL FIRING: M79

Model	*Line item No.*	*Federal stock No.*
M79, w/e	4-87258-05	1220-884-7756

General

SCALE, GRAPHICAL FIRING: M79 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M79 graphical firing scale is graduated according to FTR 762-C-1 and is used with LAUNCHER, ROCKET: 762-mm, M33.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37698).

CHARACTERISTICS

Length --
Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: None.

SCALE, GRAPHICAL FIRING: M80

Model	*Line item No.*	*Federal stock No.*
M80, w/e	4-37259-07	1220-884-7755

General

SCALE, GRAPHICAL FIRING: M80 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M80 graphical firing scale is graduated according to firing table FTR 762-B-2 and is used with LAUNCHER, ROCKET: 762-mm, truck-mounted, M289.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37761).

CHARACTERISTICS

Length

Width

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

Length

Width

Height

Volume

Gross weight

Ship tons

References:

SCALE, GRAPHICAL FIRING: M81

Model	*Line item No.*	*Federal stock No.*
M81, w/e	4-37257-05	1220-884-7754

General

SCALE, GRAPHICAL FIRING: M81 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "ELEVATION," "DRIFT," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections. The basic scale is the "RANGE" scale which includes the most advantageous range limits for the particular charge and weapon for which the graphical firing scale is designed and all other scales on the rule are plotted with reference to the "RANGE" scale.

The M81 graphical firing scale is graduated according to firing table FTR 762-E-1 and is used with LAUNCHER, ROCKET: 762-mm, truck-mounted, M386.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37761).

CHARACTERISTICS

Length

Width

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

Length

Width

Height

Volume

Gross weight

Ship tons

References:

SCALE, GRAPHICAL FIRING: SITE, M52

Secondary item

Model	*Line item No.*	*Federal stock No.*
M52, w/e	4-37270-15	1220-678-2875

General

SCALE, GRAPHICAL FIRING: site M52 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "SITE AND VERTICAL INTERVAL," etc., and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections.

The graphical firing scale M52 is graduated according to firing table FT 75-1-4 and is used with 75-mm howitzers.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Limited Standard (OTCM 37119).

CHARACTERISTICS

Length 14½ in.
Width

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-217-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-351, TM 9-1220-217-12P.

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SCALE, GRAPHICAL FIRING: SITE, M56

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M56, w/e	4-37285-20	1220-678-2879

General

SCALE, GRAPHICAL FIRING: site M56 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "SITE AND VERTICAL INTERVAL," and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections.

The graphical firing scale M56 is graduated according to FT 8-J-1 and is used with 8-inch howitzers.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard B (OTCM 37504).

CHARACTERISTICS

Length -- 14½ in.
Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-217-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length ------------------------------------
Width ------------------------------------
Height ------------------------------------
Volume ------------------------------------
Gross weight ------------------------------------
Ship tons ------------------------------------

References: SNL F-351, TM 9-1220-217-12P.

SCALE, GRAPHICAL FIRING: SITE, M58

Model	*Line item No.*	*Federal stock No.*
M58, w/e	4-37278-10	

General

SCALE, GRAPHICAL FIRING: site M58 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "SITE AND VERTICAL INTERVAL," and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections.

The graphical firing scale M58 is used with CANNON, 155-MILLIMETER GUN: M2 or M2A1 and CARRIAGE, 155-MILLIMETER GUN: M1.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 36220).

CHARACTERISTICS

Length --

Width --

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.

- Length --
- Width --
- Height --
- Volume --
- Gross weight --
- Ship tons --

References:

SCALE, GRAPHICAL FIRING: SITE, M67

Secondary item

Model	*Line item No.*	*Federal stock No.*
M67, w/e	4-37280-10	1220-789-2986

General

SCALE, GRAPHICAL FIRING: site M67 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "SITE AND VERTICAL INTERVAL," and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections.

The graphical firing scale M67 is graduated according to firing table FT 155-Q-3 and is used with CANNON, 155-MILLIMETER HOWITZER: M1A1 and HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, M44.

Differences among models

Data plate location

The data are printed on the face of the scale.

Classification: Standard A (OTCM 37413).

CHARACTERISTICS

Length
Width

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SM 9-5-1200.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SM 9-5-1200.

SCALE, GRAPHICAL FIRING: SITE, M72

Model	*Line item No.*	*Federal stock No.*
M72, w/e	4-37285-10	1220-898-6786

General

SCALE, GRAPHICAL FIRING: site M72 is a special type slide rule used in the preparation of firing data and conduct of artillery fire. It consists of rules which bear the scales or line graduations for a single function, such as "RANGE," "TARGET ABOVE GUN," "TARGET BELOW GUN," "SITE AND VERTICAL INTERVAL," and printed ballistic data, and a plastic indicator with a matte to receive pencil markings of range corrections.

The graphical firing scale M72 is graduated according to firing table FT 8-J-2 and is used with 8-inch howitzers.

Differences among models

Data plate location

Classification: Standard A (OTCM 37504).

CHARACTERISTICS

Length
Width

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SM 9-5-1200.

INSTRUCTIONAL MATERIAL

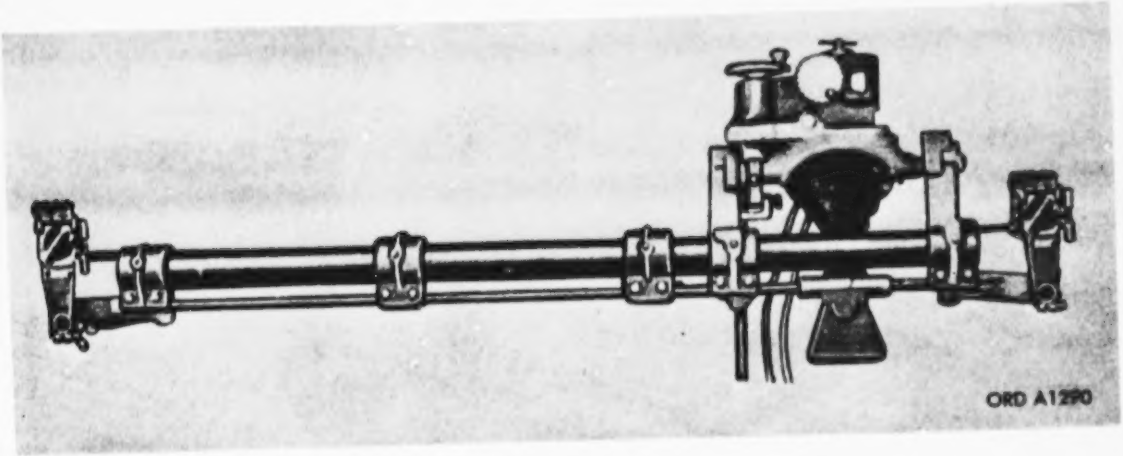
STORAGE AND SHIPMENT DATA

Within and outside Continental United States

Shipped graphical firing scales per wood box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SM 9-5-1200.

SIGHT, COMPUTING: M13A1



Model	*Secondary item* *Line item No.*	*Federal stock No.*
M13A1		1220-535-7680

General

SIGHT, COMPUTING: M13A1 converts estimates of target course and target speed into leads for the gun. At the same time, it increases automatically the vertical angle by the amount of superelevation. Estimates of the course and speed of the target are continuously made by members of the gun crew using the reflex sights M24C located at both ends of the computing sight. These estimates are set into a computing mechanism where they are resolved mechanically. The resulting action moves the reflex sights, through which the target is tracked, so that the line-of-sight with respect to the axis of the gun bore is positioned to include the necessary vertical and lateral leads. Thus, the gun tubes are displaced a sufficient amount to fire towards the target's anticipated position. Each reflex sight reticle is illuminated for night operation by a LIGHT, INSTRUMENT: M44. Speed ring sights are provided for use in the event of failure of the computing sights.

The computing sight M13A1 is used for direct fire against aircraft with CANNON, 40 MILLIMETER DUAL AUTOMATIC GUN: M2 or M2A1 on the MOUNT, GUN: 40-mm, twin M4 or M4E1, and GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin 40-mm, M19A1.

Differences among models

Data plate location

The identification plate is located on the main support bracket.

Classification: Limited standard (OTCM 37255).

CHARACTERISTICS

Target maximum limit:	
Azimuth	6,400 mils
Speed	500 mph
Superelevation:	
At 0-mil gun elevation	9 mils
At 1,600-mils gun elevation	0 mils
Direction-of-flight arrow	360°

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-316.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 computing sight per box (w/e).

Length	6 ft, 3 in.
Width	2 ft
Height	1 ft, 4 in.
Volume	16.7 cu ft
Gross weight	300 lb
Ship tons	0.42

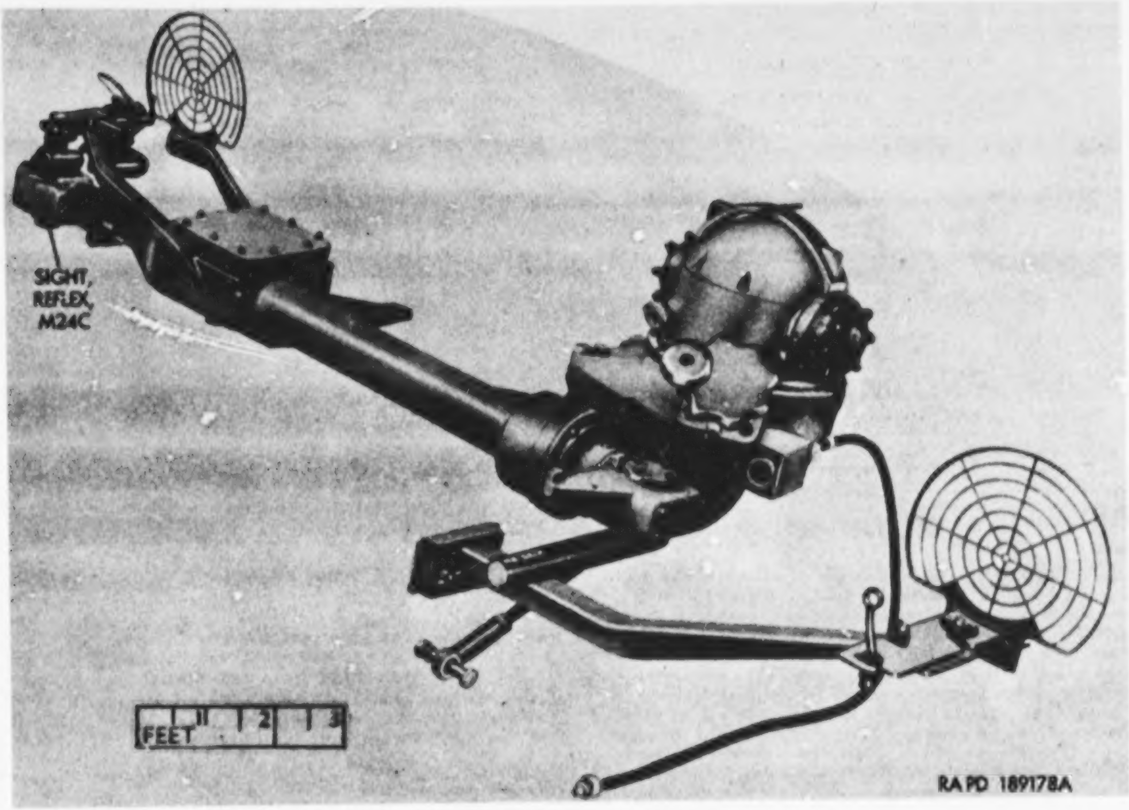
Outside Continental United States

Shipped per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-316, TM 9-1609.

SIGHT, COMPUTING: M38 (T154)



	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M38(T154)	----------------------------------	1220-766-5137

General

SIGHT, COMPUTING: M38 (T154) is an on-carriage sighting device designed for controlling fire against aerial, on vehicular or fixed targets. Estimated target course and speed information is set into the computer assembly manually by the sight-setter, where the necessary amount of lead for the gun is resolved mechanically. The resulting action moves the SIGHT, REFLEX: M24C,* through which the target is tracked, so that the line-of-sight with respect to the axis of the gun bore is deflected in both elevation and azimuth and is positioned to include the necessary vertical and lateral leads. Thus, the gun is maintained on an effective line of fire. LIGHT, INSTRUMENT: M44 illuminates the reticle of SIGHT, REFLEX: M24C for night operation. Speed ring sights are provided for use in the event of failure of the computing sight.

The computing sight M38(T154) is used on the GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin 40-mm, M42 and M42A1.

Differences among models

* For characteristics and data, see item in section 14.

Data plate location

The identification plate of SIGHT, REFLEX: M24C, is located on the sight body mount.

Classification: Standard A (OTCM 37255).

CHARACTERISTICS

Length, ring sight support stowed	5 ft, 1⅝ in.
Width	1 ft, 10⅞ in.
Height	2 ft, 1 in.
Weight	305 lb
Speed settings	0 to 700 mph (20 mph increments)
Angle:	
Target course azimuth	360°
Maximum dive	85°
Maximum climb	80°
Elevation limits (power)	−3 to ±85°
Maximum lead deflection:	
Vertical	(approx) 400 mils
Lateral	(approx) 400 mils
Superelevation:	
At 0-mil gun elevation	9 mils
At 1,600-mils gun elevation	0 mils
Gun mount operating voltage	24-volts dc
Average projectile velocity	819 yds per sec

Basic triangulation of computer:

Long leg	5.850 in.
Short leg	2.440 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7218.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped computing sight per box.

Length ----------

Width ----------

Height ----------

Volume ----------

Gross weight ----------

Ship tons ----------

Outside Continental United States

Shipped computing sight per box.

Length ----------

Width ----------

Height ----------

Volume ----------

Gross weight ----------

Ship tons ----------

References: SNL F-363, TM 9-6061, TM 9-1220-201-35P

TABLE, GRAPHICAL FIRING FAN: M1

Secondary item

Model	*Line item No.*	*Federal stock No.*
M1, w/e	4-37260-10	1220-335-4970

General

TABLE, GRAPHICAL FIRING FAN: M1 is of the protractor type and is fabricated of plastic. It is used with CANNON, 105 MILLIMETER HOWITZER: M2A1. It is a replacement for SCALE, GRAPHICAL FIRING: M39A1.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped graphical firing fan tables per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped graphical firing fan tables per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Reference: TM 9-1220-216-12P.

TABLE, GRAPHICAL FIRING FAN: M2

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M2, w/e	4-37265-10	1220-335-4971

General

TABLE, GRAPHICAL FIRING FAN: M2 is of the protractor type and is fabricated of plastic. It is used with CANNON, 155-MILLIMETER HOWITZER: M1 and M1A1.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1220-216-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped graphical firing fan tables per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped graphical firing fan tables per
Length
Width
Height
Volume
Gross weight
Ship tons

Reference: TM 9-1220-216-12P.

SECTION 13

FIRE CONTROL SYSTEMS, COMPLETE

(CLASS 1230)

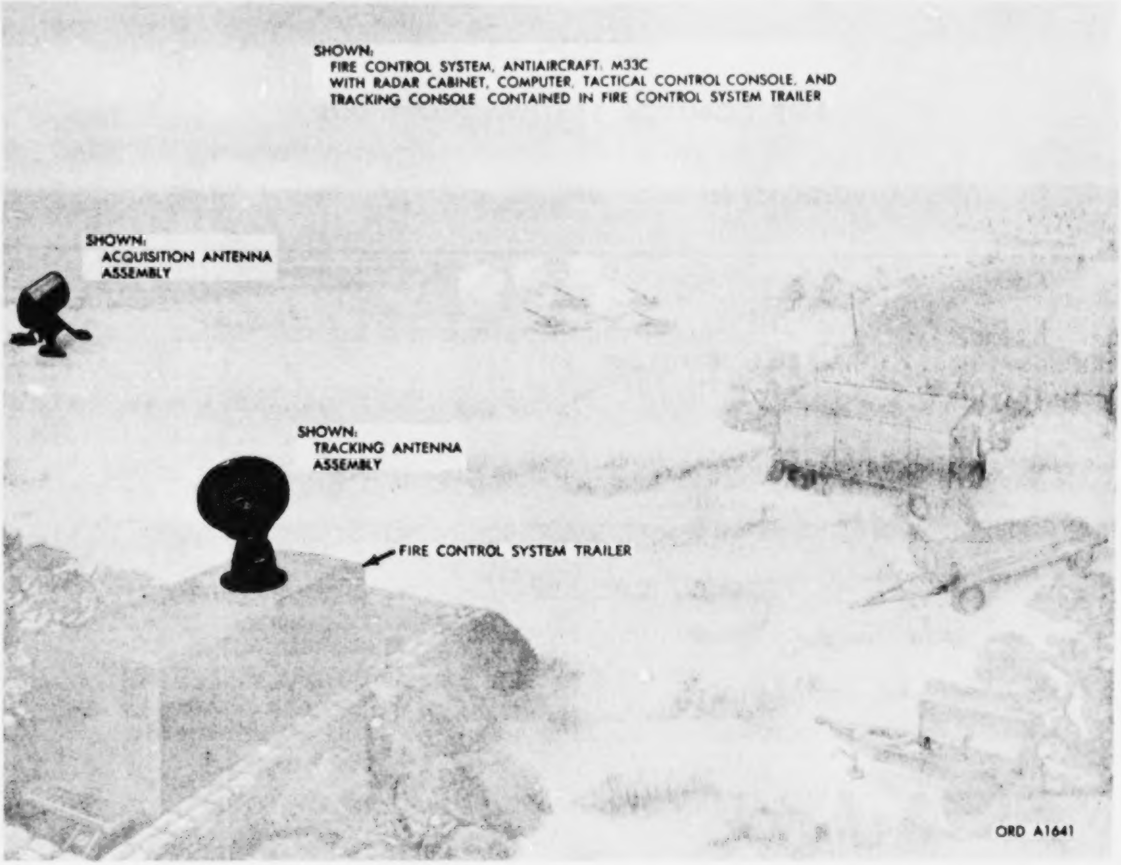
(Includes antiaircraft fire control and field artillery fire control systems.)

Page

FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C, M33A1C, M33B1C, and T33C, w/e 13-2
FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) 13-10
FIRE CONTROL SYSTEM, FIELD ARTILLERY: M35 or M35C 13-29

FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C, M33A1C, M33B1C, AND T33C, W/E

(Includes system components listed below)


SHOWN:
FIRE CONTROL SYSTEM, ANTIAIRCRAFT, M33C
WITH RADAR CABINET, COMPUTER, TACTICAL CONTROL CONSOLE, AND
TRACKING CONSOLE CONTAINED IN FIRE CONTROL SYSTEM TRAILER
SHOWN:
ACQUISITION ANTENNA
ASSEMBLY
SHOWN:
TRACKING ANTENNA
ASSEMBLY
FIRE CONTROL SYSTEM TRAILER

ORD A1641

	Major item	
Model	*Line item No.*	*Federal stock No.*
M33C	4-14444-10	1230-692-0950
M33A1C	4-14444-20	1230-692-0954
M33B1C	4-14444-30	1230-692-0945
T33C	4-14444-40	1230-692-0944

General

FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C, M33A1C, M33B1C, or T33C, consists of the ANTENNA, ACQUISITION ASSEMBLY: ORD No. 8005306 or 7621808, the CABINET, RADAR ASSEMBLY: ORD No. 7622362, 7622222, or 7622027, the ANTENNA TRACKING ASSEMBLY: ORD No. 7604171 or 7621595, the computer assembly, ORD No. 7604074 or 7621789, the CONSOLE, TACTICAL, CONTROL ASSEMBLY: ORD No. 7604182 or 7621619 and the CONSOLE, TRACKING ASSEMBLY: ORD No. 7622329 or 7622028.

The acquisition antenna continuously searches the defense area and presents target position information through the radar cabinet to the tactical control console and tracking console, where the information is displayed as acquisition video signals on a 40-inch cathode ray tube and a 5-inch cathode ray tube on each console.

Any target may be selected and transferred to the track antenna assembly. Associated with the radar cabinet assembly and tracking console assembly, to track the target and provide accurate present position information to the computer assembly, which automatically determines the firing data used to direct guns, set projectile fuses and supply coordinate data to the tactical control console assembly, which plots present and predicted target positions on plotting boards. The incoming radar impulse reflected from the target is displayed on tracking video on three 5-inch cathode ray tubes located on the tracking console. A system of cables transmits power, signal, and communication data between components of the antiaircraft fire control system. The antiaircraft fire control system M33 or T33 series is a mobile, integrated, electromechanical fire control system. It is capable of locating and displaying on a cathode-ray tube high-speed targets within the defense area, on the basis of radar or optical observation, and supplying firing data to direct accurately the fire of antiaircraft guns. To accomplish its mission, the system requires from outside sources only primary power, early warning information, and meteorological data. A periscope maintains synchronism with the ANTENNA, TRACKING ASSEMBLY, to provide visual observation of the target area, and can be used for spotting purposes, and for optical tracking. The CABINET, RADAR ASSEMBLY, the COMPUTER ASSEMBLY, the CONSOLE, TACTICAL CONTROL ASSEMBLY, and the CONSOLE, TRACKING ASSEMBLY are located in the TRAILER, FIRE CONTROL MOUNT: M242. When the system is ready for travel, all the component parts are housed on trailers.

The antiaircraft fire control systems M33C, M33A1C, M33B1C, and T33C are designed to compute the necessary firing data for controlling the 90-mm antiaircraft guns.

Components:

Page
ANTENNA, ACQUISITION ASSEMBLY: ORD No. 7621808 AND ORD No. 8005306 ---- 13-4
ANTENNA, TRACKING ASSEMBLY: ORD No. 7604171 AND ORD No. 7621595 ---- 13-5
CABINET, RADAR ASSEMBLY: ORD No. 7622027, ORD No. 7622222, AND ORD No. 7622362 ---- 13-6
COMPUTER ASSEMBLY: ORD No. 7604074 AND ORD No. 7621780 ---- 13-7
CONSOLE, TACTICAL CONTROL ASSEMBLY: ORD No. 7604182 AND ORD No. 7621619 ---- 13-8
CONSOLE, TRACKING ASSEMBLY: ORD No. 7622028 AND ORD No. 7622329 ---- 13-9

Differences among models

The various models of the antiaircraft fire control system M33 and T33 series are basically similar. The models differ in the type of trailers, trucks, truck chassis, and vans used. Fire control systems M33C and M33A1C employ a rectangular, horizontally elongated ANTENNA, ACQUISITION ASSEMBLY: ORD No. 8005306. M33B1C and T33C employ a round-reflector ANTENNA, ACQUISITION ASSEMBLY: ORD No. 7621808.

Classification: Standard B (OTCM 37119), except T33C.

PERFORMANCE

Acquisition radar:	
Range	120,000 yd
Search altitude	75,000 ft
Rotation	10, 20, or 30 rpm
Tracking radar:	
Limits of operation:	
Azimuth	no limit
Elevation	—180 to +1,600 mils
Range	0 to 100,000 yd
Target speed	0 to 1,500 fps

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-342.

STORAGE AND SHIPMENT DATA

Within Continental United States

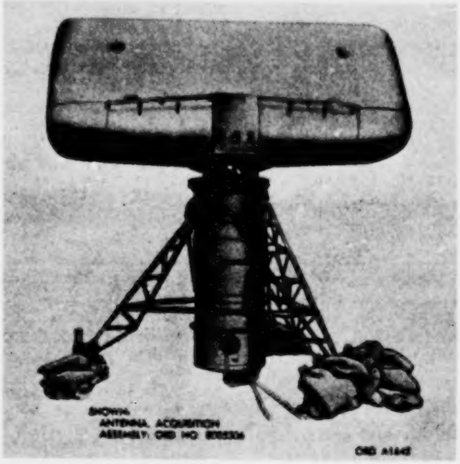
Shipped
Length ----
Width ----
Height ----
Volume ----
Gross weight ----
Ship tons ----

Outside Continental United States

Shipped
Length ----
Width ----
Height ----
Volume ----
Gross weight ----
Ship tons ----

References: SNL F-342, TM 9-6092 series, TM 9-6093 series, TM 9-679B, TM 9-9620 series, FM 44-33A.

ANTENNA, ACQUISITION ASSEMBLY: ORD NO. 7621808 AND ORD NO. 8005306



Model	*Line item No.*	*Federal stock No.*
ORD NO. 7621808		1230-762-1808
ORD NO. 8005306		1230-800-5306

General

ANTENNA, ACQUISITION ASSEMBLY: ORD No. 7621808 or ORD No. 8005306, consists of an antenna and antenna drive, orientation test set, radio frequency coupler, acquisition modulator, and antenna mounting legs. The acquisition antenna is a reflector-type antenna with a fiberglass protective dome. The antenna receives radio frequency energy, forms it into a beam, and radiates it into space. In the M33 system, the beam is raised or lowered by use of the cosecant bar; in the T33 system, the beam is raised or lowered by vertical movement of the acquisition scanner. The antenna also picks up the returned echo signals, reflected from the target, and feeds them to the CABINET, RADAR ASSEMBLY. The acquisition antenna assembly and the CABINET, RADAR ASSEMBLY are components of the acquisition radar, which presents range and azimuth position information of the target to the tracking radar (see ANTENNA, TRACKING ASSEMBLY). The acquisition antenna controls, which consist of the azimuth-acquisition control and the range-acquisition control, are components of the CONSOLE, TACTICAL CONTROL ASSEMBLY and console tracking assembly. The acquisition antenna radiates radio pulses in either a pencil-shaped beam or a cosecant-squared beam, and continuously searches the defense area. It normally rotates continuously through 360° of azimuth at speeds of 10, 20, or 30 rpm. The radio frequency rotary coupler transfers power and signal voltages between the fixed components of the antenna mounting and the rotating portion of the acquisition antenna. The acquisition antenna assembly is not located on the fire-control system trailer when the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33 or T33 series is emplaced, but is separately emplaced on the ground.

The acquisition antenna assembly ORD No. 7621808 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C and T33C. The model ORD No. 8005306 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C.

Differences among models

Model ORD No. 7621808 is a round-reflector antenna, used with FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C and T33C. Model ORD No. 8005306 is a rectangular, horizontally elongated antenna, used with FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C.

Data plate location

Classification: Standard B.

CHARACTERISTICS

Peak power	1 megawatt
Frequency band	3,100 to 3,500 mc
Length	16 ft
Width	5 ft
Height	15 ft
Weight	2,343 lb

PERFORMANCE

Rotation	10, 20, or 30 rpm
Search altitude	75,000 ft
Range	120,000 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-342.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

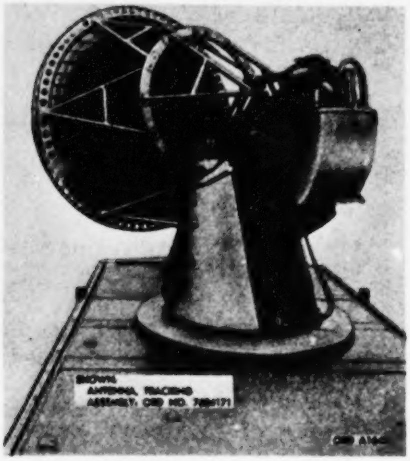
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-342, TM 9-6092 series, TM 9-6093 series, TM 9-9620 series.

ANTENNA, TRACKING ASSEMBLY: ORD NO. 7604171 AND ORD NO. 7621595



Model	*Line item No.*	*Federal stock No.*
ORD No. 7604171		1230-760-4171
ORD No. 7621595		1230-762-1595

General

ANTENNA, TRACKING ASSEMBLY: ORD No. 7604171 or ORD No. 7621595 consists of the elevation and azimuth tracking drives and data converters, upper section and lower section periscopes, collector ring, tracking radio frequency coupler, tracking scanner, and tracking waveguide lens. The tracking antenna ORD No. 7604171 or ORD No. 7621595 is mounted on the fire-control system trailer roof. The collector ring transfers power and signal voltages between the fixed components of the fire-control system trailer and the rotating portion of the tracking antenna. The tracking antenna is a reflector-type antenna, which radiates a sharply focused pencil beam in a conical path. It receives returned echo pulses reflected from any target upon which it may be directed. The tracking antenna assembly and the CABINET, RADAR ASSEMBLY are components of the tracking radar, which tracks a target and furnishes accurate target range, azimuth and elevation position information to the COMPUTER ASSEMBLY. A periscope maintains synchronism with the tracking antenna to provide visual observation of the target area, and can be used for spotting purposes, and for optical tracking.

The tracking antenna assembly ORD No. 7604171 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C. ORD No. 7621595 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C and T33C.

Differences among models

The two models are basically similar, differing in minor details.

Data plate location

Classification: Standard B.

CHARACTERISTICS

Limits of operation:	
Azimuth	no limit
Elevation	—180 to +1,600 mils
Peak power (RF)	250 kw
Frequency band	8,500 to 9,600 mc
Width, waveguide lens diameter	6 ft, 9 in.

PERFORMANCE

Range	100,000 yd

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-342.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

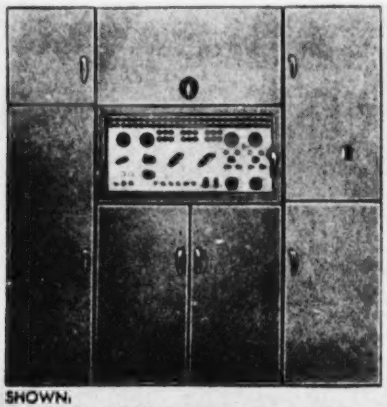
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-342, TM 9-6092 series, TM 9-6093 series, TM 9-679B, TM 9-9620 series.

CABINET, RADAR ASSEMBLY: ORD NO. 7622027, ORD NO. 7622222, AND ORD NO. 7622362



SHOWN:
CABINET, RADAR
ASSEMBLY: ORD NO. 7622362 ORD A1646

Model	*Line item No.*	*Federal stock No.*
ORD No. 7622027		1230-762-2027
ORD No. 7622222		1230-762-2222
ORD No. 7622362		1230-762-2362

General

CABINET, RADAR ASSEMBLY: ORD No. 7622027, 7622222, or 7622362, houses many of the assemblies of the acquisition and tracking radars, and transmits accurate slant range information to the computer assembly. The radar cabinet consists of the radar power control panel; low voltage power supplies; voltage regulators; delay timers; acquisition and track radar high voltage power supplies; tracking trigger, carrier, timing wave, and tracking range generators; tracking and range modulators; elevation and azimuth angle detectors, and high power servos; relay and test amplifiers; pulse demodulators; pulse and moving target synchronizers; video and mark mixer, and the switching and mixing unit.

The radar cabinet assembly ORD No. 7622027 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: T33C. Model ORD No. 7622222 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C. Model ORD No. 7622362 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C.

Differences among models

The various models are basically similar, differing in minor details.

Data plate location

Classification: Standard B.

CHARACTERISTICS

Frequency:

Acquisition radar	3,100 to 3,500 mc
Tracking radar	8,500 to 9,600 mc

Peak (RF) power:

Acquisition radar	1,000 kw
Tracking radar	250 kw

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-342.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 radar cabinet per box.
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped 1 radar cabinet per box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-342, TM 9-6092 series, TM 9-6093 series, TM 9-679B, TM 9 9620 series.

COMPUTER ASSEMBLY: ORD NO. 7604074 AND ORD NO. 7621789

SHOWN:
COMPUTER ASSEMBLY: ORD NO. 7604074 ORD A1647

Model	*Line item No.*	*Federal stock No.*
ORD No. 7604074		
ORD No. 7621789		

General

COMPUTER ASSEMBLY: ORD Nos. 7604074 and 7621789 consists of the computer power control panel; correction panel; low voltage power supplies; voltage regulators; computer modulators; low power servo and DC amplifiers; relay panels; fuse, elevation, azimuth, and time of flight servos. The computer assembly receives accurate present position information from the radar cabinet assembly and tracking antenna assembly and automatically determines the firing data, which is used to direct guns and set projectile fuses and to supply coordinate data to tactical control console assembly, which plots present and predicted target positions on plotting boards. The computer assembly calculates where to aim a gun, considering the motion of the target along either a straight line or a curved path, at a constant or changing speed, likewise considering the forces that affect the speed of the projectile due to gravity and atmospheric conditions.

The computer assembly ORD No. 7604074 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C. The model ORD No. 7621789 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C and T33C.

Differences among models

The various models are basically similar, differing in minor details.

Data plate location

Classification: Standard B.

CHARACTERISTICS

Limits of operation:
  Azimuth .... no limit
  Elevation .... −200 to +1,600 mils
Slant range .... 40,000 yd
Time of flight (servo) .... 36 sec
Target velocity .... 500 yd per sec
Wind velocity .... 70 mph
Angular tracking rate:
  Azimuth .... 700 mils/sec
  Elevation .... 500 mils/sec

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-342.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

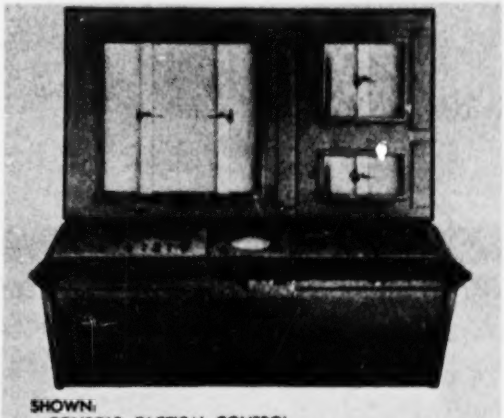
Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References: SNL F-342, TM 9-6092 series, TM 9-6098 series, TM 9-679B, TM 9-9620 series.

CONSOLE, TACTICAL CONTROL ASSEMBLY: ORD NO. 7604182 AND ORD NO. 7621619



SHOWN:
CONSOLE, TACTICAL CONTROL
ASSEMBLY: ORD NO. 7604182 ORD A1646

Model	*Line item No.*	*Federal stock No.*
ORD No. 7604182		
ORD No. 7621619		

General

CONSOLE, TACTICAL CONTROL ASSEMBLY: ORD Nos. 7604182 and 7621619, consists of the horizontal-range, present and predicted altitude plotting boards; plan position, precision and target rate indicators; acquisition antenna control and monitor-control panels. Present and predicted target position coordinate plotting data is supplied to the tactical control console assembly by the computer assembly. The horizontal-range plotting board plots present and predicted target positions in the horizontal plane. The altitude plotting board consists of two sections: one plots present altitude and present horizontal range; the other plots predicted altitude and predicted horizontal range. The target-rate indicator displays target velocity and acceleration information on panel meters. The controls of the acquisition antenna assembly which are part of the tactical control console assembly consist of the azimuth-acquisition control, range-acquisition control, elevation and azimuth acquisition scan controls.

The tactical control console assembly ORD No. 7604182 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C. The model ORD No. 7621619 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C and T33C.

Differences among models

The various models are basically similar, differing in minor details.

Data plate location

Classification: Standard B.

CHARACTERISTICS

Plotting boards:
Width:

Horizontal range	28.8 in.
Present altitude	14.4 in.
Predicted altitude	14.4 in.

Height:

Horizontal range	28.8 in.
Present altitude	7.38 in.
Predicted altitude	14.76 in.

Limits of operation:

Horizontal range	40,000 yd
Present altitude	—500 to +20,000 yd
Predicted altitude	500 to 14,260 yd altitude. 0 to 36 sec time of flight.

PERFORMANCE

EQUIPMENT

Basic issue Items: See ORD 7 SNL F-342.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 tactical control console per box.

Length ----------------
Width ----------------
Height ----------------
Volume ----------------
Gross weight ----------------
Ship tons ----------------

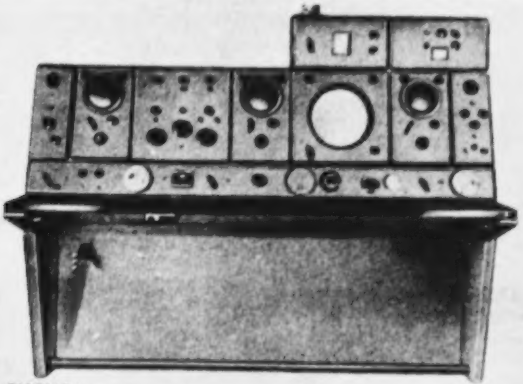
Outside Continental United States

Shipped 1 tactical control console per box.

Length ----------------
Width ----------------
Height ----------------
Volume ----------------
Gross weight ----------------
Ship tons ----------------

References: SNL F-342, TM 9-6092 series, TM 9-6093 series, TM 9-679B, TM 9-9620 series.

CONSOLE, TRACKING ASSEMBLY: ORD NO. 7622028 AND ORD NO. 7622329



SHOWN:
CONSOLE, TRACKING
ASSEMBLY: ORD NO. 7622329

ORD A1644

Model	*Line item No.*	*Federal stock No.*
ORD No. 7622028		
ORD No. 7622329		

General

CONSOLE TRACKING ASSEMBLY: ORD No. 7622028 or 7622329 consists of the precision, trial-fire, tracking elevation, azimuth, range and plan-position indicators, tracking and acquisition receiver controls; indicator high voltage power supply; and the tracking-console control drawer. The tracking console assembly provides indicators and controls for observing and tracking targets designated by the officer stationed at the tactical control console.

The tracking console assembly ORD No. 7622028 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33B1C and T33C. The tracking console assembly ORD No. 7622329 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C and M33A1C.

Differences among models

The two models are basically similar, differing in minor details.

Data plate location

Classification: Standard B.

CHARACTERISTICS

Cathode-ray tube display precision indicator:
  Diameter .... 5 in.
  Observation area:
    Angle, in azimuth .... 534 mils
    Range .... 5,000 yd

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-342.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

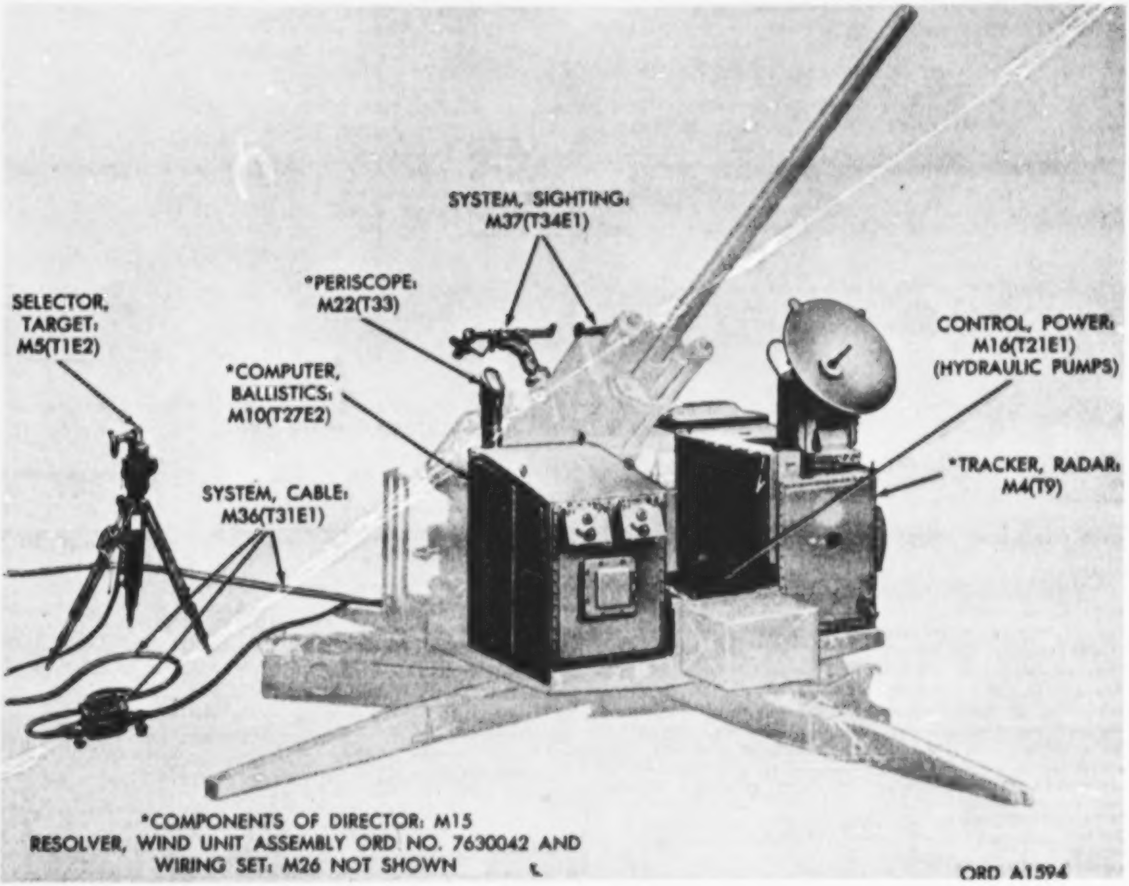
Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References: SNL F-342, TM 9-6092 series, TM 9-6093 series, TM 9-679B, TM 9-9620 series.

FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38)
(Includes system components listed below)


SYSTEM, SIGHTING: M37(T34E1)
*PERISCOPE: M22(T33)
SELECTOR, TARGET: M5(T1E2)
*COMPUTER, BALLISTICS: M10(T27E2)
CONTROL, POWER: M16(T21E1) (HYDRAULIC PUMPS)
*TRACKER, RADAR: M4(T9)
SYSTEM, CABLE: M36(T31E1)
ORD A1594

*COMPONENTS OF DIRECTOR: M15
RESOLVER, WIND UNIT ASSEMBLY ORD NO. 7630042 AND
WIRING SET: M26 NOT SHOWN

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M38 (T38), w/e		1230-764-9436

General

FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) is used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51 to form a compact, highly mobile weapon designed primarily for use against low flying high speed aircraft and designated as the "Skysweeper." Components of the DIRECTOR: M15 (T41E2), the TRACKER, RADAR: M4 (T9), and COMPUTER, BALLISTICS: M10 (T27E2) supply automatic gun laying data to the CONTROL, POWER: M16 (T21E1) of the gun and to PERISCOPE: M22 (T33) on the computer which is continuously alined with the antenna of the radar scanner, except in search. The RESOLVER, WIND UNIT ASSEMBLY ORD No. 7630042 introduces wind component corrections to the electronic computing circuits of the power control. The gun may be positioned on a target manually by means of handwheels, sighting being done by auxiliary TELESCOPE: M96 (AZIMUTH) and TELESCOPE: M96C (ELEVATION) of the SYSTEM, SIGHTING, AUXILIARY: M37 (T34E1). The SELECTOR, TARGET: M5 (T1E2) is an auxiliary sighting device which is used to spot visible targets that are more hazardous than the one the on-mount personnel have engaged, and to sound a warning horn on the mount, automatically alining the radar beam with the spotted target. The WIRING SET: M26 (T5E2) includes electrical connections to the gun mount and the fire control system. The CABLE SYSTEM, FIRE CONTROL: M36 (T31E1) includes the power supply cable, and the electrical connections between the target selector and the on-mount major items of the fire control system.

Component: Page
- CONTROL, POWER: M16 (T21E1) 13-12
- DIRECTOR: M15 (T41E2) 13-13
  - COMPUTER, BALLISTICS: M10 (T27E2) 13-14
  - PERISCOPE: M22 (T33) 13-15
  - RESOLVER, WIND, UNIT ASSEMBLY, ORD No. 7630042 13-17
  - TRACKER, RADAR: M4 (T9) 13-18
- SELECTOR, TARGET: M5 (T1E2) 13-20
- CABLE SYSTEM, FIRE CONTROL: M36 (T31E1) 13-22
- SIGHTING SYSTEM, AUXILIARY: M37 (T34E1) 13-24
- TELESCOPE: M96 (T155) (azimuth) and M96C (T155E1) (elevation) 13-25
- WIRING SET: M26 (T5E1) 13-27

Classification: Standard B (OTCM 37256).

PERFORMANCE

Limits of operation:	
Elevation:	
Powered	−90 to 1,490 mils
Manual	−106 to 1,511 mils
Azimuth	no limit
Searching range	24,000 yd
Target speed	0 to 1,800 fps

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

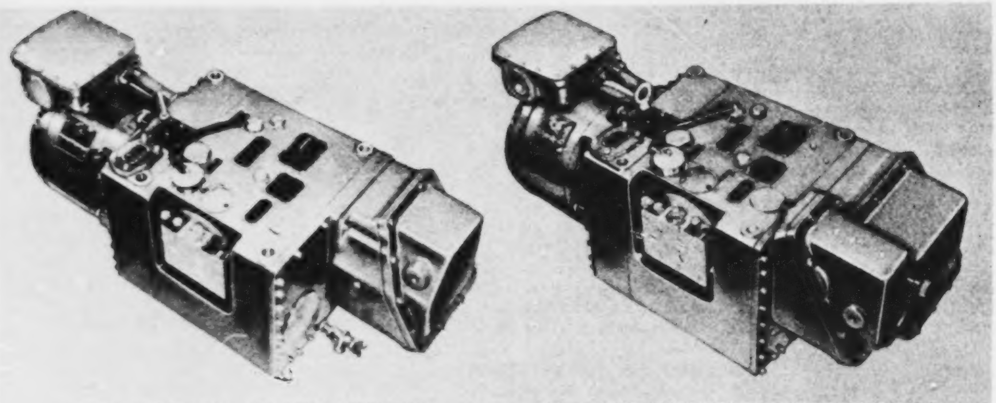
Shipped	
Length	8 ft, $8\frac{7}{16}$ in.
Width	6 ft, $9\frac{5}{8}$ in.
Height	6 ft, $3\frac{3}{16}$ in.
Volume	373 cu ft
Gross weight	2,700 lb
Ship tons	9.33

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-350, TM 9-8026, TM 9-6081.

CONTROL, POWER: M16 (T21E1)



PUMP, HYDRAULIC, AZIMUTH, ASSEMBLY PUMP, HYDRAULIC, ELEVATION, ASSEMBLY

ORD A1618

Secondary item

Shown: Control, Power: M16, W/O case and gearing assemblies, hydraulic lines and fittings

Model	*Line item No.*	*Federal stock No.*
M16 (T21E1)		1290-335-5033

General

CONTROL, POWER: M16 (T21E1) includes the gun traversing and elevating equipment of the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 and contains two independently operating power systems, an azimuth power system and an elevation power system. Each power system consists of a hydraulic pump assembly, a case assembly housing the amplifier chassis, a gearing assembly, hydraulic lines and fittings. The hydraulic pumps drive the hydraulic motors geared to the elevation rack of the gun cradle and the azimuth ring gear. The gun dial assemblies, mounted on the gearing assemblies, contain dials for indicating gun azimuth and elevation. The COMPUTER, BALLISTICS: M10 calculates the gun position required to score hits on a target and supplies separate azimuth and elevation information to the power control M16, which positions the gun accordingly for firing by traversing the top carriage and simultaneously elevating or depressing the gun.

The power control M16 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

The identification plates of the azimuth power control and of the elevation power control are located on the corresponding case assemblies.

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Type	Electro-hydraulic-mechanical
Elevation limit:	
Manual:	
Upper	1,511 mils
Lower	—106 mils
Powered:	
Upper	1,490 mils
Lower	—90 mils
Variable, lower	+720 to —90 mils
Azimuth coverage	continuous 6,400 mils
Slew speed, maximum:	
Azimuth	1,050 mils/sec
Acceleration, average:	
Azimuth	1,500 mils/sec 2
Elevation	2,000 mils/sec 2
Hydraulic pressure, maximum:	
Azimuth	3,000 psi
Elevation	2,000 psi
Hydraulic transmission, each:	
Replenishing pressure	110 psi
Fluid capacity	5½ gal
Mechanical transmission, each:	
Oil capacity	5 qt
Power requirements	115-v, 60-c, 3-phase ac
Power control case assembly:	
Length	49 in.
Width	14 in.
Height	29 in.
Hydraulic pump assembly:	
Length	31 in.
Width	13 in.
Height	14 in.
Weight, dry:	
Azimuth power system	1,000 lb
Elevation power system	1,000 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL F-350, TM 9-3026, TM 9-6081.

DIRECTOR: M15 (T41E2)

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M15 (T41E2)	------------------------------	1210-335-5030

General

DIRECTOR: M15 (T41E2) is composed of the COMPUTER, BALLISTICS: M10 (T27E2), PERISCOPE: M22 (T33), RESOLVER, WIND UNIT ASSEMBLY (ORD No. 7630042), and TRACKER, RADAR: M4 (T9). During tracking operation the TRACKER, RADAR: M4 (T9) continuously furnishes target present position information to the COMPUTER, BALLISTICS: M10 (T27E2). From these data, the computer calculates the gun position required to score on the target. The computer also includes a PERISCOPE: M22 (T33) for manually controlled optical tracking of an acquired target. Wind corrections are introduced to the computer circuits by the RESOLVER, WIND UNIT ASSEMBLY ORD No. 7630042 to compensate for the effect of ballistic wind on the projectile during its time of flight.

The director M15 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

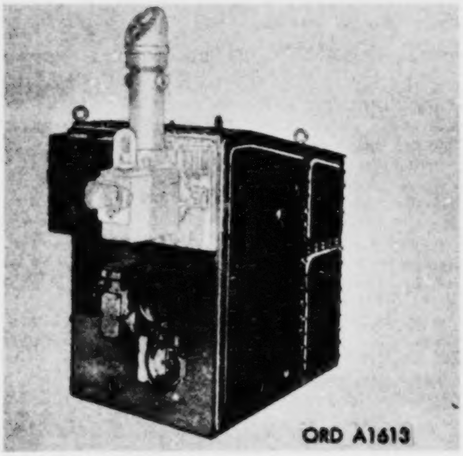
Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

References: SNL F-350, TM 9-3026, TM 9-6081.

COMPUTER, BALLISTICS: M10 (T27E2)


ORD A1613

Secondary item

Model	*Line item No.*	*Federal stock No.*
M10 (T27E2)		1285-335-5085

General

COMPUTER, BALLISTICS: M10 (T27E2) components are contained in a large console mounted in the forward right corner of the gun carriage of the gun mount and to the right of the gun barrel. Mounted on the rear face of the console are the PERISCOPE: M22, the handlebar unit, rate sensitivity switch, and the dial panel unit containing dials, control knobs, the gun control switch, and control transmitters. The console contains two electronic racks and five electro-mechanical assemblies which include the converter units, prediction unit, inverter unit, and the ballistic unit. PERISCOPE: M22 is connected mechanically through shafts to a converter unit, computer servo motors position the optical elements of the periscope, thereby affording a means of optical tracking. The periscope line-of-sight is normally alined with the radar, when traveling, the periscope swings outward and down. The ballistics computer M10 is mechanically and electrically, through WIRING SET: M26, connected to the TRACKER RADAR: M4 and to CONTROL, POWER: M16. The CABLE FIRE CONTROL SYSTEM, M36 connects the computer to the SELECTOR, TARGET: M5. The ballistics computer M10 is used to calculate gun-positioning data from target present-position data. Present-position information is supplied as electrical data either by TRACKER, RADAR: M4 or by the handlebar unit and PERISCOPE: M22. From this information, the ballistics computer M10 continuously calculates the gun position required to score hits on a target and supplies this information to CONTROL, POWER: M16, which positions the gun accordingly. The RESOLVER, WIND UNIT ASSEMBLY ORD No. 7630042, mounted on the CONTROL, POWER: M16, introduces wind corrections to the computer circuits to compensate for the effect of ballistic wind on the projectile during its time of flight.

The ballistics computer M10 is a part of the DIRECTOR: M15, which is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38), used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

The identification plate is located on the rear face of the console.

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Type	electro-mechanical
Coverage:	
Altitude	—1,650 to 11,500 yd
Elevation	—185 to 1,550 mils
Slant range	0 to 11,500 yd
Target speed	0 to 600 yd/sec
Projectile time of flight	0 to 14.5 sec
Quadrant elevation	—200 to 1,550 mils
Wind velocity	0 to 120 mph
Muzzle velocity correction	2,625 to 3,025 fps
Air density correction	—25 to 25 percent
Trunnion tilt correction	5°
Power requirements	115-v, 60 c, 3-phase, ac
Depth	61 in.
Width	34½ in.
Height	65¼ in.
Weight	1,902 lb
Weight (w/PERISCOPE: M22)	2,080 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

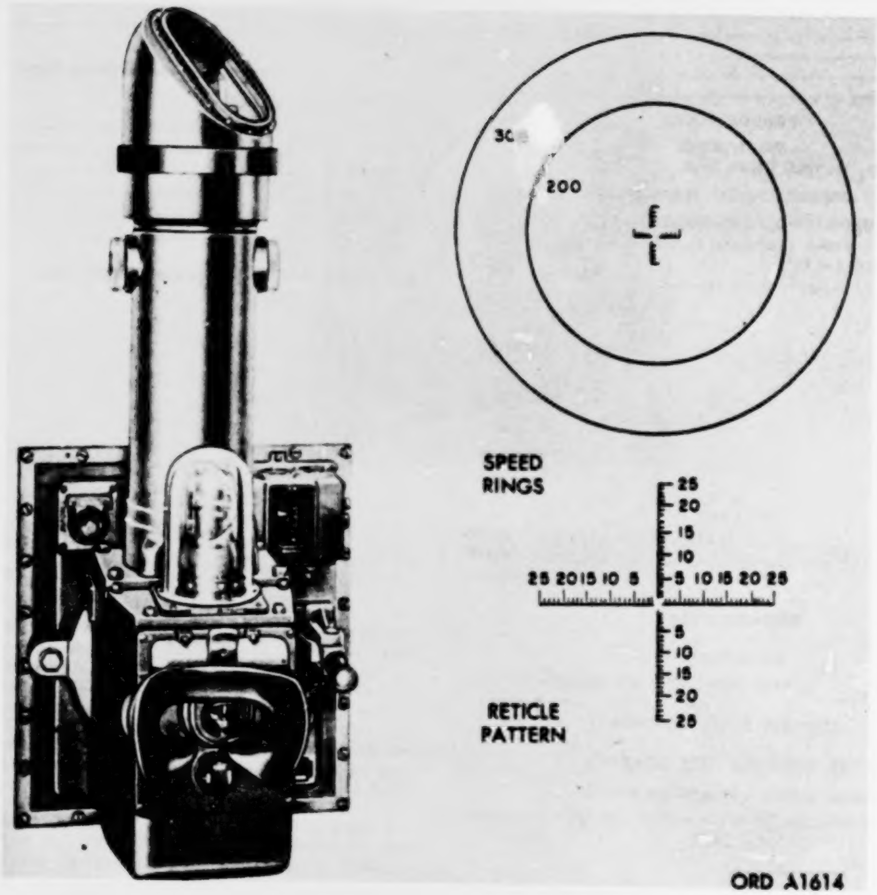
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F 350, TM 9-3026, TM 9-6081.

PERISCOPE: M22 (T33)



ORD A1614

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M22 (T33)	--------------------------------	1240-335-5086

General

PERISCOPE: M22 (T33) is an optical instrument that has an offset line-of-sight to enable an operator to view the target without exposing himself. It consists of a main housing which mounts **the periscope tube** with a rotating head, an eyepiece, a line-of-sight indicator, and a filter control. The housing, tube, and head contain prisms and lenses. Light enters the rotating head through a glass window, is reflected down by a right angle reflecting head prism, passes through a Dove prism which is rotated by a gear mechanism, to maintain an erect image and is deflected into the eyepiece by a Penta prism in the main housing. Periscope M22 (T33) is bolted to the rear of the console unit of COMPUTER, BALLISTICS: M10 (T27E2), and is connected mechanically, through shafts to the converter unit. Computer servo motors position the optical elements of the periscope, thereby affording a means of optical tracking. The periscope line-of-sight is normally continuously alined with the antenna of the tracking radar scanner except in search. The operator of the COMPUTER, BALLISTICS: M10 (T27E2) can assume control of the gun through the handlebar unit beneath the periscope sight, firing buttons on the handlebar unit are provided for firing the gun during radar automatic and periscopic tracking. The reticle is placed in the optical system of the periscope M22, and the combined image of reticle markings and target are transmitted by the optical system as a single image. The reticle speed rings are used to track rapidly moving targets, as an emergency mode of operation. Proper lead is introduced to the gun by centering the target on one of the speed rings instead of the reticle. These speed rings are graduated to introduce lead angles consistent with target speeds of 200 or 300 yd/sec. Reticle lamps provide illumination of the reticles. During traveling, the periscope is folded downward for protection.

Periscope M22 (T33) is a part of DIRECTOR: M15 (T41E2), which is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38), used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

The identification plate is located on the periscope assembly base

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Coverage:	
Azimuth	continuous 6,400 mils
Elevation	—200 to 1,550 mils
Magnification	2 X
Field of view	30°
Weight	128 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 periscope per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

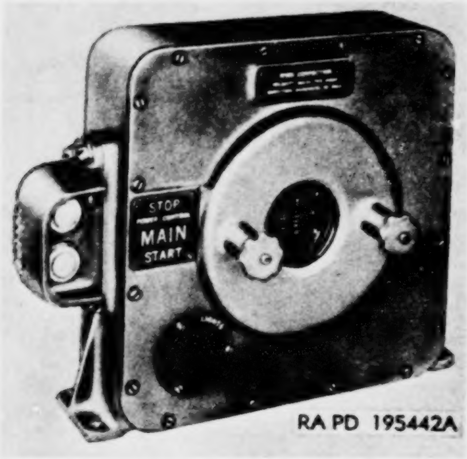
Outside Continental United States

Shipped 1 periscope per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-350, TM 9-3026, TM 9-6081.

RESOLVER, WIND, UNIT ASSEMBLY, ORD NO. 7630042



Secondary Item

Model	*Line item No.*	*Federal stock No.*
ORD No. 7630042		1290-763-0042

General

RESOLVER, WIND, UNIT ASSEMBLY, ORD No. 7630042 contains terminal blocks and potentiometers, and introduces wind component corrections to the electronic computing circuits of COMPUTER: M10 (T27E2). Two dials and knobs provide for manually setting the values of ballistic wind into the wind resolver. The MAIN START-STOP buttons for CONTROL, POWER: M16 are also located on the resolver case. WIRING SET: M26 provides connections from the wind resolver to CONTROL, POWER: M16. The wind resolver is mounted on the elevation main case of CONTROL, POWER: M16.

The wind resolver is a part of the DIRECTOR: M15, which is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38), used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

The identification plate is located on the cover.

Classification: Standard B.

CHARACTERISTICS

Azimuth coverage	continuous 6,400 mils
Wind velocity	0 to 120 mph
Power requirements	80-v, 60-c, 1-phase, ac
Length	12 in.
Width	12 in.
Height	3 in.
Weight	20 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 wind resolver assemblies per shipping container

Length	2 ft, 8 in.
Width	2 ft, ⅛ in.
Height	1 ft, 9⅛ in.
Volume	9.6 cu ft
Gross weight	182 lb
Ship tons	0.24

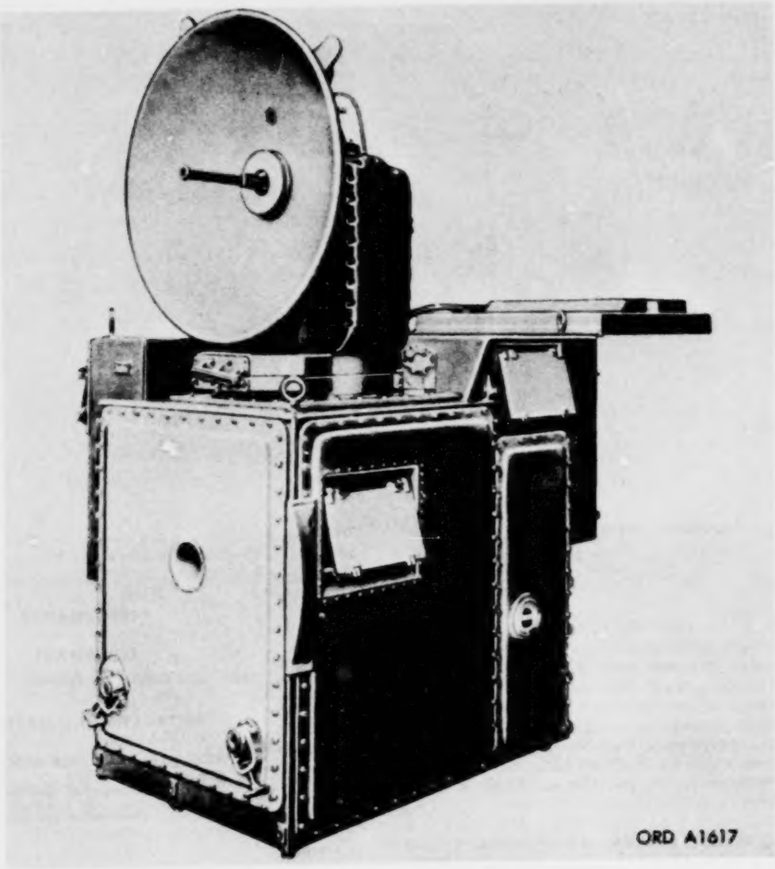
Outside Continental United States

Shipped 12 wind resolver assemblies per shipping container

Length	2 ft, 8 in.
Width	2 ft, ⅛ in.
Height	1 ft, 9⅛ in.
Volume	9.6 cu ft
Gross weight	182 lb
Ship tons	0.24

References: SNL F-350, TM 9-3026-1, TM 9-3026-3, TM 9-6081 series.

TRACKER, RADAR: M4 (T9)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M4 (T9)		1285-762-9514

General

TRACKER, RADAR: M4 (T9) consists of electronic components contained in a large console mounted to the left of the gun barrel, and of a parabolic reflector-type antenna of a scanner unit mounted on top of the console. The console unit mounts 20 subassemblies including amplifiers, synchronizer, oscillator, radar modulator, range indicator, magnetron and linkage, regulated power supply, and motor generator. The scanner unit includes a parabolic reflector, antenna and antenna nutator assembly, carried in trunnions providing for the elevation motion of these three items. The trunnions are free to rotate in azimuth. A shaft transmits gun azimuth data to the radar. The WIRING SET: M26 interconnects the radar tracker M4 and the COMPUTER, BALLISTICS: M10. Target range is obtained by measuring the time interval between the transmission of a pulse of radio frequency energy and the reception of reflections of this energy from the target. The radar tracker M4 detects airborne targets and tracks automatically any selected target. It supplies automatically target present-position data, azimuth, elevation, and slant range to COMPUTER, BALLISTICS: M10. The radar tracker can likewise be set to search the sky for targets, it can be set for manual range tracking, or in the periscope search and SELECTOR, TARGET: M5 modes of operation, the parabolic reflector-type antenna of the scanner unit, follows the PERISCOPE: M22 of the COMPUTER, BALLISTICS: M10 but does not originate data.

The radar tracker M4 is a part of the DIRECTOR: M15, which is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38), used on GUN, ANTIAIRCRAFT, ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Wavelength, nominal	3 cm
Frequency	8,500 to 9,600 megacycles
Peak power output	40 kw
Power requirements	115-v, 60-c, 3-phase, ac

Range:	
Searching, maximum	24,000 yd
Automatic tracking	21,000 yd
Minimum	300 yd
Elevation limit (scanner):	
Lower	—175 mils
Upper	1,550 mils
Azimuth coverage	continuous 6,400 mils
Rotation of scanner, maximum	60 rpm
Tracking rates, automatic or manual:	
Elevation angle	750 mils/sec
Azimuth angle	1,500 mils/sec
Slant range	600 yd/sec
Length	6 ft, 3 in.
Width	3 ft, 6 in.
Height	6 ft, 8 in.
Weight	2,068 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT D

Within Continental United States

Shipped 1 radar tracker per box.

Length ……………………………………

Width ……………………………………

Height ……………………………………

Volume ……………………………………

Gross weight ……………………………………

Ship tons ……………………………………

Outside Continental United States

Shipped 1 radar tracker per box.

Length ……………………………………

Width ……………………………………

Height ……………………………………

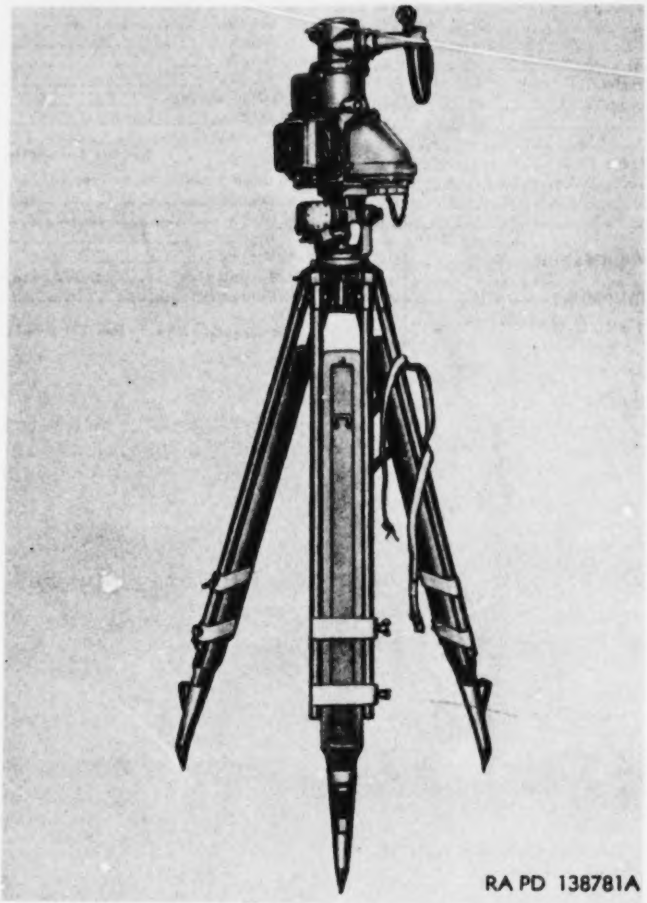
Volume ……………………………………

Gross weight ……………………………………

Ship tons ……………………………………

References: SNL F-350, TM 9-3026, TM 9-6081.

SELECTOR, TARGET: M5 (T1E2)



RA PD 138781A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M5 (T1E2)		1285-763-0366

General

SELECTOR, TARGET: M5 (T1E2) is an off-mount auxiliary sighting unit of SYSTEM, FIRE CONTROL: M38 (T38) which is used to spot visible targets that are more hazardous than the one the on-mount personnel have engaged, and to sound a warning horn on the mount, automatically alining the radar beam with the spotted target. The target selector M5 consists of the target selector group and the TRIPOD: M25 (T25). The target selector group consists of the cant corrector which supports the target selector group on the tripod; the transformer housing and quill housing groups; the leveling assembly fastened to the transformer housing, consisting of two vial levels; and the turret group which supports a signal light and includes a control arm supporting the ring sight and the hand grip that contains the trigger switch for signalling from the target selector M5 to the gun mount. Pressing the trigger switch on the hand grip sounds a warning horn on the gun mount. Rotation of the handgrip in a vertical plane and of the turret in a horizontal plane is translated into electrical data by the synchro control transformers contained in the transformer housing. This data can be used by the fire control system on the mount to lay the gun and direct the computer periscope and radar scanner to any target, that is sighted through the target selector ring sight. When not in use, the target selector group is stowed in the CASE, CARRYING: T63. CABLE SYSTEM, FIRE CONTROL: M36 (T31E1) includes the target selector M5 and the on-mount major items of the SYSTEM, FIRE CONTROL: M38.

The target selector M5 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

The identification plates are located on the housing and on the tripod head assembly.

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Type ......ring and peep sight, manually operated, tripod-mounted

Coverage:

- Elevation ....—200 mils to 1,600 mils
- Azimuth ....continuous 6,400 mils

Target selector group:

- Height ....19 in.
- Diameter of path of handle, maximum ....17 in.

Weight ....28.2 lb

Tripod:

- Height:
  - Extended, maximum ....64½ in.
  - Telescoped ....42½ in.
- Diameter, folded ....6⅝ in.
- Weight ....20.5 lb

Carrying case:

- Length ....20¼ in.
- Width ....14½ in.
- Height ....11½ in.
- Weight ....35.0 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 target selector per box.

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

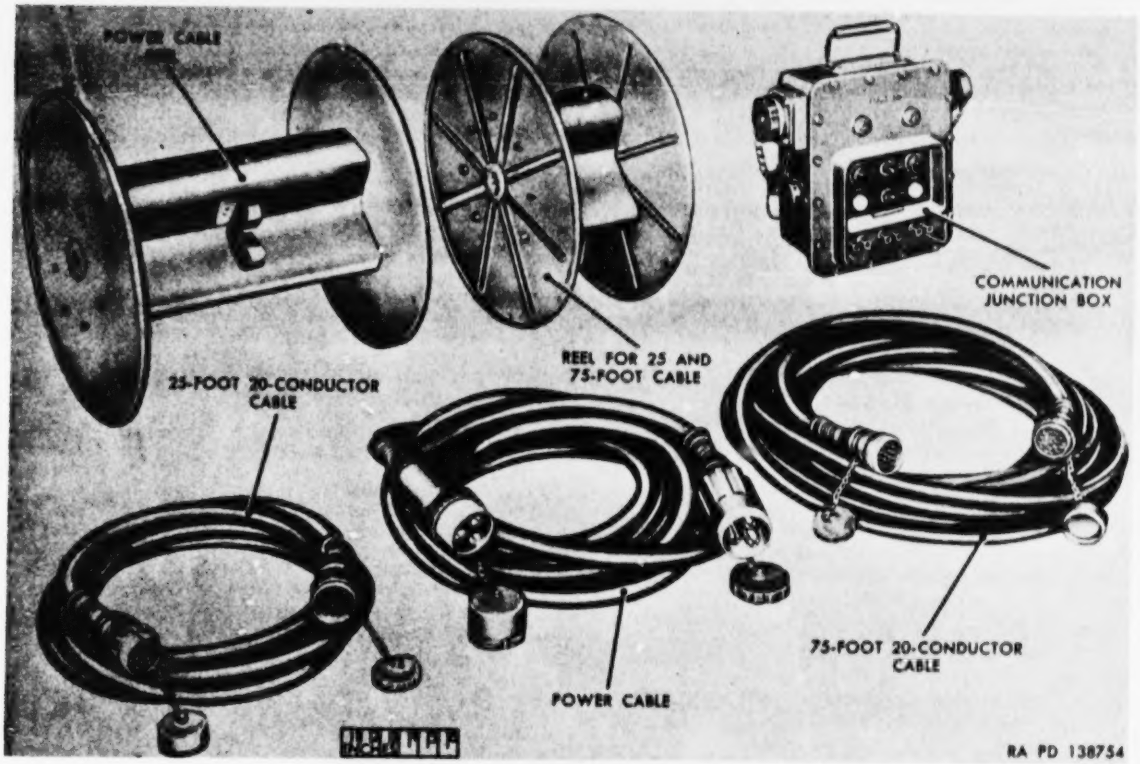
Outside Continental United States

Shipped 1 target selector per box.

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-350, TM 9-3026, TM 9-6081.

CABLE SYSTEM, FIRE CONTROL: M36 (T31E1)


POWER CABLE REEL
COMMUNICATION JUNCTION BOX
REEL FOR 25 AND 75-FOOT CABLE
25-FOOT 20-CONDUCTOR CABLE
75-FOOT 20-CONDUCTOR CABLE
POWER CABLE

RA PD 138754

Model	Secondary item Line item No.	Federal stock No.
M36 (T31E1)		1290-762-5928

General

CABLE SYSTEM, FIRE CONTROL: M36 (T31E1) includes three cables, two reels, and the communication junction box. Two cables, the 25-foot 20-conductor cable and the 75-foot 20-conductor cable, stowed in the shorter of the two reels are used to connect the SELECTOR, TARGET: M5 (T1E2) with the on-mount major items of the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) through the WIRING SET: M26 (T5E1) and the communication junction box. These two cables are identical except for length and are interchangeable. The third, 150-foot 3-conductor power cable, which is stored on the other reel, is used to interconnect the 115-volt ac power source and the WIRING SET: M26 (T5E1), thereby supplying the integral fire control system with primary power. Each cable reel is fitted with a clamp for holding a cable connector while the cable is being wound onto the reel. These cables and the communication junction box transmit power and communication, including alarm, signal data, voice and radio between the on-mount and off-mount system components. Each of the three cables terminates in a male plug on one end and a female receptacle on the other. These connectors are protected with screw-on caps when the cable assemblies are wound on the reels. The communication junction box is waterproof, it serves as a control point and includes facilities for linking the communication circuits of the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) with external telephone and radio circuits. The communication junction box includes a control panel on which are mounted switches; pilot lights; cable receptacles; two 115-volt convenience outlets; binding posts for two telephone sets and for radio input to the communication circuit; ringers; relays; resistors; terminal blocks; and wiring.

The cable system M36 (T31E1) is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Number of cables	3
Number of reels	2
Length of cable:	
Mount junction box to communication junction box	25 ft
Target selector to communication junction box	75 ft
Power	150 ft
Weight:	
Cables and reels, total	414 lb
Communication junction box	27 lb

Communication junction box:

Length ---------- 12 in.

Width ---------- 9½ in.

Height ---------- 7½ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 cable system per box.

Length ----------

Width ----------

Height ----------

Volume ----------

Gross weight ----------

Ship tons ----------

Outside Continental United States

Shipped 1 cable system per box.

Length ----------

Width ----------

Height ----------

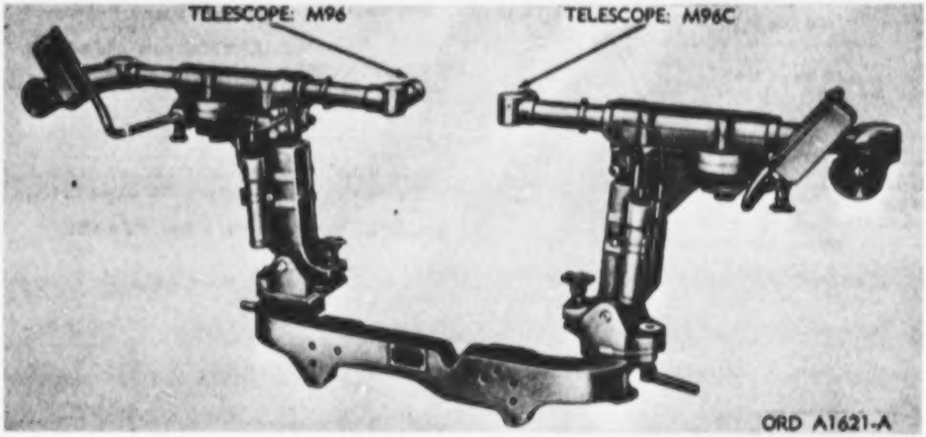
Volume ----------

Gross weight ----------

Ship tons ----------

References: SNL F-360, TM 9-9036, TM 9-6081.

SIGHTING,. SYSTEM, AUXILIARY: M37 (T34E1)



Secondary item		
Model	*Line item No.*	*Federal stock No.*
M37 (T34E1)		1240-763-0292

General

SIGHTING SYSTEM, AUXILIARY: M37 (T34E1) consists of a suporting bracket mounted on the rear of the transmission box of the loader rammer and straddling the gun barrel. The telescopes, one on the left, TELESCOPE: M96 (azimuth) and the other on the right, TELESCOPE: M96C (elevation), are mounted on the opposite ends of the supporting bracket. The main mounting bracket assembly supports two telescope bracket assemblies, each consisting of a yoke hinged to a mount bracket, to which a pivoting clamp is attached. The mount bracket supports an instrument light clamp and the telescope clamp provides paired screws for the lateral and vertical adjustments for boresight of the telescopes. The telescopes and their mounting brackets can be detached from the main supporting bracket and stowed in a carrying case. Each telescope contains a suitable reticle which is illuminated by means of dry cell batteries. Two headrests and three pairs of filters are provided.

The sighting system M37 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51. The sighting system M37 is used for emergency ground fire only, when the gun is sighted in the conventional manner with the telescopes of the sighting system, the gun laying being achieved through the manual operation of the azimuth and elevation handwheels on the power control main cases.

Differences among models

Data plate location

The identification plate is located on the main bracket assembly.

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Type	two fixed periscopic telescopes
Magnification, each telescope	3X
Sighting position:	
Width	68 in.
Height	22 in.
Weight, completely assembled	99 lb
Stowed position:	
Width	59 in.
Height	21 in.
Telescope mount bracket, stowed position:	
Width	46 in.
Height	16½ in.
Depth	18 in.
Weight, completely assembled	18 lb
Carrying case:	
Width	22⅛ in.
Height	15⅛ in.
Length	31 in.
Weight	67 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 sighting system per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

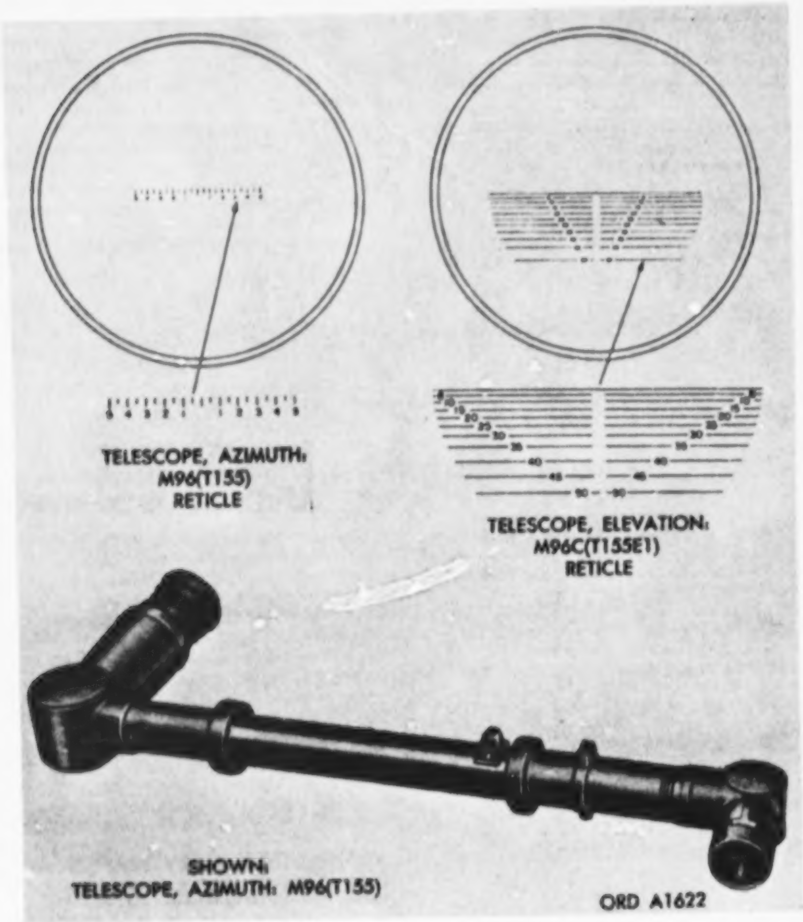
Outside Continental United States

Shipped 1 sighting system per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-350, TM 9-3026, TM 9-6081.

TELESCOPE: M96 (T155) (AZIMUTH) AND M96C (T155E1) (ELEVATION)


5 4 3 2 1 1 2 3 4 5
TELESCOPE, AZIMUTH: M96(T155) RETICLE
10
15
20
25
30
35
40
45
50
TELESCOPE, ELEVATION: M96C(T155E1) RETICLE
SHOWN: TELESCOPE, AZIMUTH: M96(T155)

ORD A1622

Model	Secondary item Line item No.	Federal stock No.
M96 (T155)		1240-335-5043
M96C (T155E1)		1240-335-5044

General

TELESCOPE: M96 (T155) (azimuth) and M96C (T155E1) (elevation) are optical instruments that have an offset line-of-sight. The telescopes are symmetrical opposites of each other but their optical systems are identical. Each telescope consists of a head assembly, a tube, and an elbow assembly. The head assembly contains the head prism and supports a window and sunshade. The tube encloses the objective assembly and the reticle and erector assembly that contains the reticle lens, two erector lenses, and associatd diaphragms and spacers. The elbow contains the elbow prism and the eyelens assembly, and supports the eyeshade. The telescope M96 contains an azimuth reticle and telescope M96C contains an elevation reticle. The image is presented superimposed on the reticle pattern to the observer. An instrument light on each telescope illuminates the reticle pattern.

The azimuth telescope M96 and the elevation telescope M96C are mounted on the opposite ends of the supporting bracket of SIGHTING SYSTEM, AUXILIARY: M37 (T34E1) which is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38) used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51. The gun is sighted in the conventional manner with the azimuth and elevation telescopes M96 and M96C for emergency ground fire only, the gun laying being achieved through the manual operation of the azimuth and elevation handwheels on the power control main cases.

Differences among models

The telescopes M96 and M96C are symmetrical opposites of each other. The telescope M96 contains an azimuth reticle and telescope M96C contains an elevation reticle.

Data plate location

The identification plates of the azimuth and elevation telescopes are located on the elbow assemblies.

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Magnification	3 power
Field of view	13° 25 min
Eye distance	2.165 in.
Width	10⅛ in.
Diameter, maximum	3 in.
Length	2 ft, 2½ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D–48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

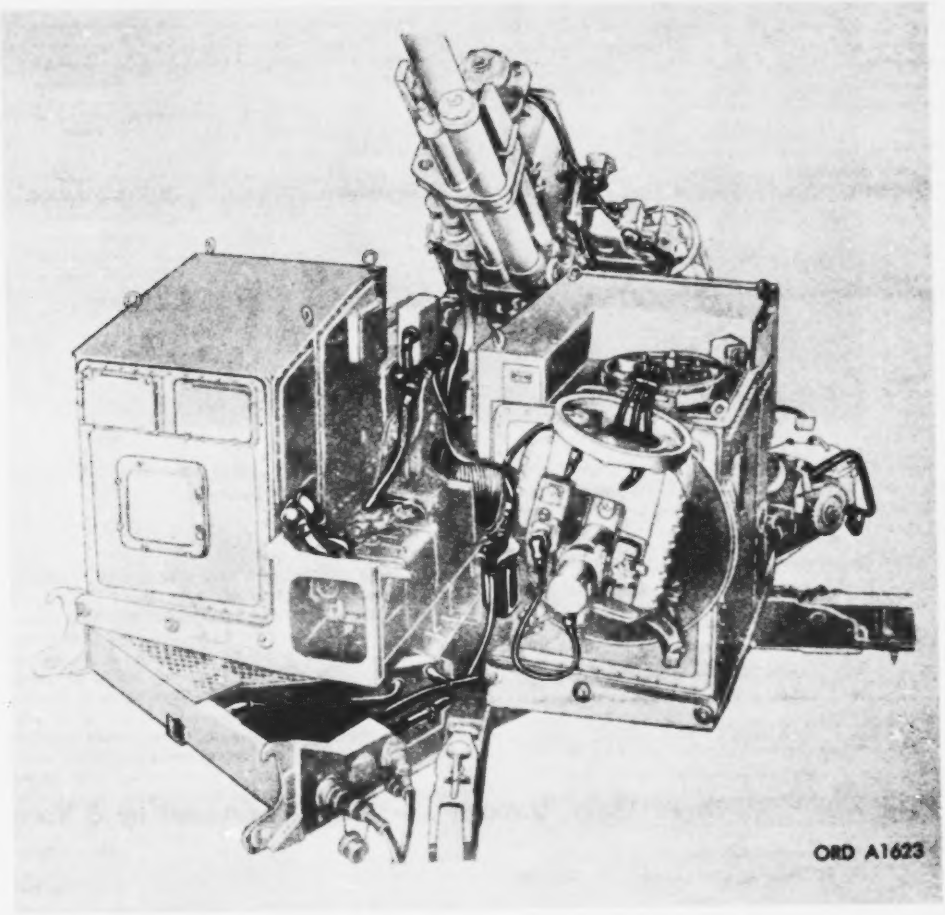
Shipped
  Length --
  Width --
  Height --
  Volume --
  Gross weight --
  Ship tons --

Outside Continental United States

Shipped
  Length --
  Width --
  Height --
  Volume --
  Gross weight --
  Ship tons --

References: SNL F–350, TM 9–3026, TM 9–6081.

WIRING SET: M26 (T5E1)



	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M26 (T5E1)	------------------------------	1290-762-6243

General

WIRING SET: M26 (T5E1) consists of a junction box and a collector ring assembly that are located within the gun pedestal, and seven cable harnesses that are enclosed in metal conduits the ends of which make waterproof connections with the major items. Each cable conductor is terminated in a terminal block connection. The wiring set M26 complements SYSTEM, CABLE: M36 in supplying power to all major items of the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 and interconnects these items for the transmission of power, signal data, and communication data. The off-mount components of the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 are connected electrically through the SYSTEM, CABLE: M36 to the junction box that, in turn, connects the off-mount components and the power source to the collector ring assembly through which are made all electrical connections between the fixed pedestal and the rotatable top carriage of the gun mount. The leads from the collector ring assembly are connected to a terminal board on the elevation power control case. Cable harnesses from components within the elevation power control case extend to the COMPUTER, BALLISTICS: M10 console, the elevation hydraulic assembly, the azimuth power control case and RESOLVER, WIND, UNIT ASSEMBLY ORD No. 7630042. Additional cable harnesses interconnect the COMPUTER, BALLISTICS: M10 console unit, the azimuth hydraulic assembly, azimuth power control case, and the junction box on loader rammer.

The wiring set M26 is a component of FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38 (T38), used on GUN, ANTIAIRCRAFT ARTILLERY, TOWED: 75-mm weapons system, M51.

Differences among models

Data plate location

The identification plate of the collector ring assembly is located on the bottom of the cover. A manila tag is attached to a screw supporting the junction box.

Classification: Standard B (OTCM 37255).

CHARACTERISTICS

Number of cables	7
Junction box:	
Length	20¾ in.
Width	18⅝ in.
Height	6⅝ in.
Collector ring assembly:	
Diameter	15 in.
Height	16½ in.
Weight:	
Cables, total	62⅛ lb
Junction box	62 lb
Collector ring assembly	57 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D–48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 wiring set per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

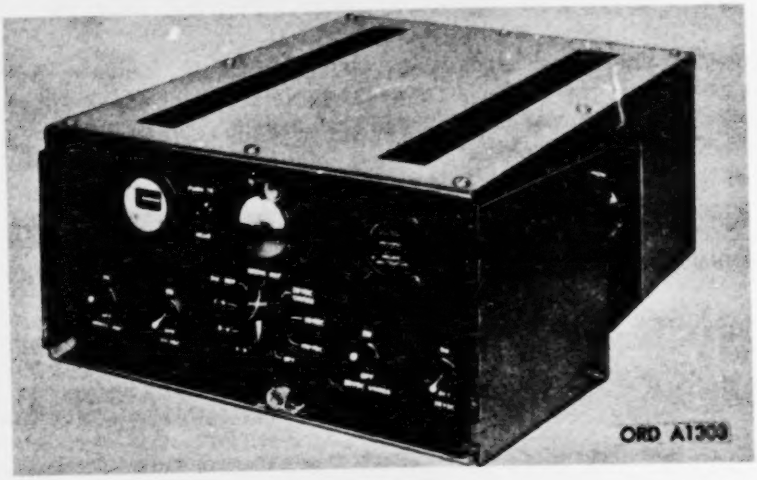
Shipped 1 wiring set per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F–350, TM 9–3026, TM 9–6081.

Pages 13-29 through 13-32 are rescinded by C 3.

POWER SUPPLY: M27



Model	*Secondary item Line item No.*	*Federal stock No.*
M27		1220–772–7682

General

POWER SUPPLY: M27 is used with COMPUTER, GUN DIRECTION: M15 or M15C, either when the computer is used alone or as a component of FIRE CONTROL SYSTEM, FIELD ARTILLERY: M35 or M35C.

The power supply is contained in an aluminum case. Two recessed grooves along the length of the lid, into which fit the U-channel runners attached to the bottom of the case, permit the power supplies to be stacked for battalion operation. The front panel, visible when the doors are opened, contain circuit breakers, an elapsed time indicator, a push-button-operated frequency meter, a test voltmeter, and the voltmeter circuit selector switch. The rear panel of the power supply has a recessed surface for mounting four connectors.

Differences among models

Data plate location

The identification plate (nameplate) is mounted on the left-hand door of the power supply.

Classification: Standard B (OTCM 36883).

CHARACTERISTICS

Height	6 in.
Width	12 in.
Depth	1 ft. 3½ in.
Weight	25 lb

PERFORMANCE

Input voltage	120v, 400 cps, 3 phase
Output	120v, 400 cps (Sig and servo ref), 28v dc, 120v dc

EQUIPMENT

STORAGE AND SHIPMENT DATA

Basic Issue Items: See TM 9-1220-206-12.

INSTRUCTIONAL MATERIAL

Within Continental United States

Shipped power supplies per

Length --

Width --

Height --

Volume --

Gross weight --

Ship tons --

Outside Continental United States

Shipped power supplies per

Length --

Width --

Height --

Volume --

Gross weight --

Ship tons --

References: TM 9-1220-206-12, TM 9-1260-200-12, TM 9-1220-206-20P, TM 9-1220-206-34, TM 9-1220-206-35P.

SECTION 14

OPTICAL SIGHTING AND RANGING EQUIPMENT

(CLASS 1240)

(Includes auxiliary sighting system; periscope, sight, and telescope mounts; elbow and panoramic telescopes; periscopes; range finders; bore and reflex sights; sightunits; telescope adapters; and telescope mount holders.) (For additional adapter telescopes, azimuth instruments, periscopes, and telescopes, see section 27. For additional periscope and telescope mounts, see section 18.)

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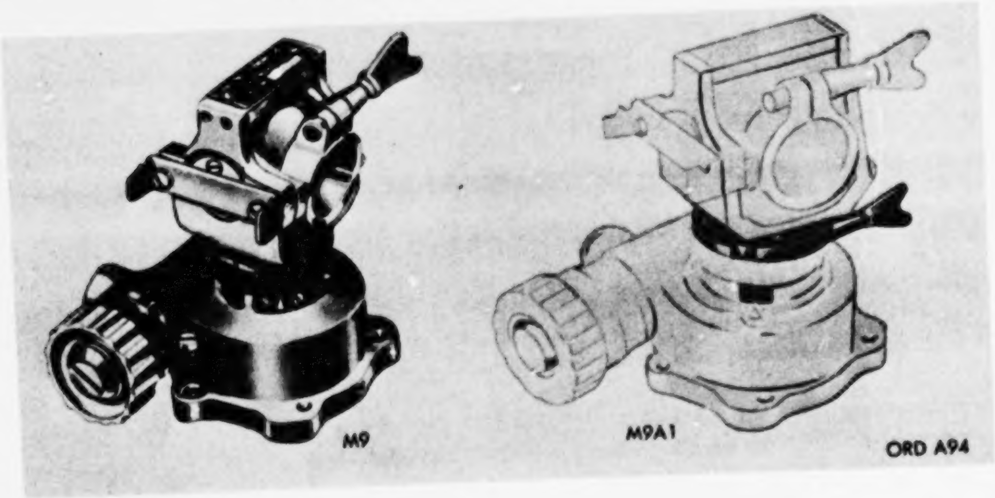
ADAPTER, TELESCOPE: M9 AND M9A1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M9		1240-344-4650
M9A1		1240-300-7988

General

ADAPTER, TELESCOPE: M9 or M9A1, is a component of SIGHTUNIT: M34A1 when supporting TELESCOPE, ELBOW: M62A1C and a component of SIGHTUNIT: M34A2C when supporting TELESCOPE, ELBOW: M62A1D. The telescope adapters are mounted on telescope mount M79 with cross-level assembly (ORD No. 6271189). The telescope adapter is composed of the telescope holder assembly and the azimuth worm housing assembly. The TELESCOPE, ELBOW: M62 or M62A1C, is mounted in the telescope holder of the telescope holder assembly. The telescope holder is pivoted so that it may be tilted manually to raise or depress the telescope 15 degrees in elevation above or below a level (zero) line. The telescope adapter M9 is used as a component of SIGHTUNIT: M34 or M34A1. The telescope adapter M9A1 is used as a component of SIGHTUNIT: M34A2. The telescope adapter M9 or M9A1 is used in conjunction with TELESCOPE, ELBOW: M62 or M62A1C, may be issued in lieu of TELESCOPE, PANORAMIC: M1, when used with CANNON, 75 MILLIMETER PACK HOWITZER: M1A1 and M8.

Differences among models

The azimuth clamp on the telescope adapter M9A1 locks the azimuth scale on the azimuth housing by means of the clamping wing screw. An index is provided on the clamp to aline the azimuth scale with the index on the azimuth worm housing. The scale on the telescope adapter M9 can be rotated after the four, flathead, special screws that secure the azimuth clamping rings are loosened. The telescope adapter M9A1 and the micrometer scale can be released for setting purposes by depressing the scale release button. The scale on the telescope adapter M9 is secured by the slotted locking-nut within the micrometer knob.

Data plate location

The identification plate is located on the top surface of the bar of the bracket, of the telescope holder assembly.

Classification:

M9	Limited standard (used for training) (OTCM 37284)
M9A1	Standard A

CHARACTERISTICS

Weight	2 lb
Height	3½ in.
Width (along centerline of worm gear):	
M9	3 in.
M9A1	3¼ in.
Depth (through azimuth worm housing)	3 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

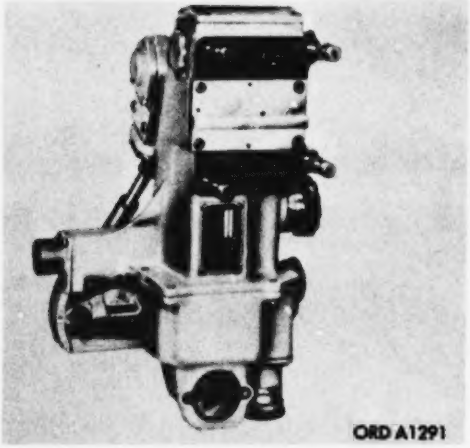
Shipped 60 telescope adapters per shipping container	
Length	2 ft, ½ in.
Width	1 ft, 10¾ in.
Height	1 ft, 3 in.
Volume	4.8 cu ft
Gross weight	175 lb
Ship tons	0.12

Outside Continental United States

Shipped 60 telescope adapters per shipping container	
Length	2 ft, ½ in.
Width	1 ft, 10¾ in.
Height	1 ft, 3 in.
Volume	4.8 cu ft
Gross weight	175 lb
Ship tons	0.12

References: SNL F-324, TM 9-1240-298-35.

CORRECTOR, CANT: M3 (T16)


ORD A1291

Secondary item

Model	*Line item No.*	*Federal stock No.*
M3		1240-622-4978

General

CORRECTOR, CANT: M3 (T16), which mounts to DRIVE-MOUNT, PERISCOPE, M9 (T36), is a component of the primary fire control system for TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1 (T43E2). An optical-mechanical instrument, the cant corrector improves the sighting accuracy of the tank's 120-mm gun cannon by compensating for deflection errors caused by a canted position of the vehicle. The cant corrector projects an illuminated reticle image into the 6-power field of view of PERISCOPE: M29.

Differences among models

Data plate location

The identification plate (nameplate) is located

A caution plate is located

Classification: Standard A.

CHARACTERISTICS

Height	(approx) 11⅝ in.
Width	(approx) 8 in.
Depth:	
Input shaft extended	(approx) 8 in.
Input shaft retracted	(approx) 5 in.
Weight	(approx) 11¼ lb
Limits (right or left cant)	15°

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 3 cant correctors per shipping container

Length	2 ft, 5 in.
Width	1 ft, 4½ in.
Height	1 ft, ⅝ in.
Volume	3.538 cu ft
Gross weight	63.94 lb
Ship tons	0.09

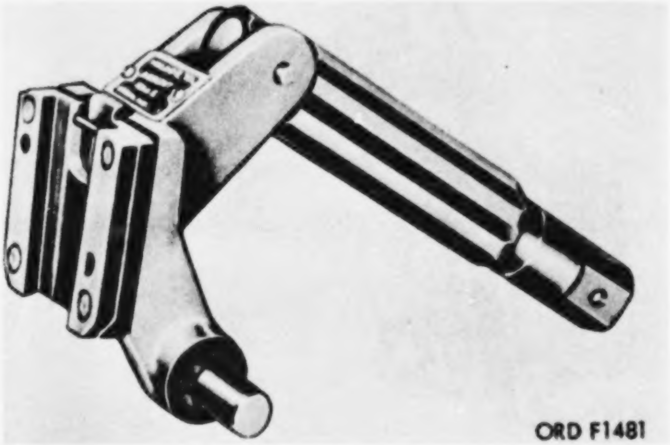
Outside Continental United States

Shipped 3 cant correctors per shipping container

Length	2 ft, 5 in.
Width	1 ft, 4½ in.
Height	1 ft, ⅝ in.
Volume	3.538 cu ft
Gross weight	63.94 lb
Ship tons	0.09

References: TM 9-1290-277-35, TM 9-1290-277-35P.

HOLDER, TELESCOPE MOUNT: XM5



ORD F1481

Secondary item

Model	*Line item No.*	*Federal stock No.*
XM5		1240-691-5538

General

HOLDER, TELESCOPE MOUNT, XM5 is the means by which TELESCOPE, ELBOW: XM107 and MOUNT, TELESCOPE, XM117 are attached to the weapon of battle group lightweight weapon system XM28. It is also used to correct the effects of cant.

Differences among models

Data plate location

The identification plate (nameplate) is located on the rocker arm.

Classification: Standardization pending.

CHARACTERISTICS

Length	6⅝ in.
Width	2½ in.
Height	2 in.
Weight	1 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1000-209-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 80 telescope mount holders per shipping container

Length	3 ft, 9 in.
Width	1 ft, 11½ in.
Height	1 ft, 2½ in.
Volume	8.78 cu ft
Gross weight	189 lb
Ship tons	0.22

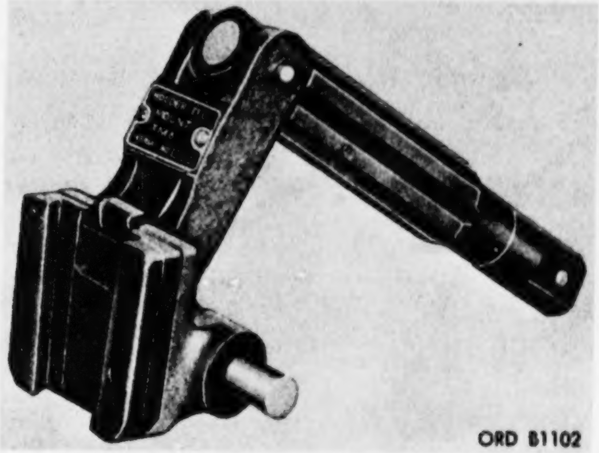
Outside Continental United States

Shipped 80 telescope mount holders per shipping container

Length	3 ft, 9 in.
Width	1 ft, 11½ in.
Height	1 ft, 2½ in.
Volume	8.78 cu ft
Gross weight	189 lb
Ship tons	0.22

References: TM 9-1240-284-35, TM 9-1240-284-35P.

HOLDER, TELESCOPE MOUNT: XM6


ORD 81102

Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM6	....	1240-691-5539

General

HOLDER, TELESCOPE MOUNT, XM6 is the means by which TELESCOPE, ELBOW: XM107 and MOUNT, TELESCOPE: XM117 are attached to the weapon of battle group heavy weapon system XM29. It is also used to correct the effects of cant.

Differences among models

Data plate location

The identification plate (nameplate) is located on the rocker arm.

Classification: Standardization pending.

CHARACTERISTICS

Length	7½ in.
Width	2½ in.
Height	2 in.
Weight	1 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1000-209-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 80 telescope mount holders per shipping container

Length	3 ft, 7½ in.
Width	1 ft, 10½ in.
Height	1 ft, 2½ in.
Volume	8.22 cu ft
Gross weight	178 lb
Ship tons	0.21

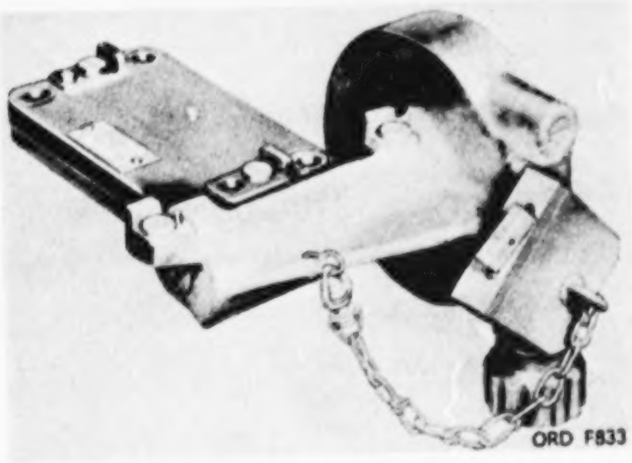
Outside Continental United States

Shipped 80 telescope mount holders per shipping container

Length	3 ft, 7½ in.
Width	1 ft, 10½ in.
Height	1 ft, 2½ in.
Volume	8.22 cu ft
Gross weight	178 lb
Ship tons	0.21

References: TM 9-1240-284-35, TM 9-1240-284-35P.

HOLDER, TELESCOPE MOUNT: XM7



Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM7		1240-789-2987

General

HOLDER, TELESCOPE MOUNT: XM7, is designed to hold SIGHTUNIT: M34A2C on LAUNCHER, ROCKET: 318-mm, XM34 and LAUNCHER, ROCKET: 115-mm, M91 (T145). It is attached to a bracket on the left side of the launcher. It allows the sightunit to be used to lay the launcher in azimuth and elevation for indirect fire.

Differences among models

Data plate location

The identification plate (nameplate) is located on the upper base of the telescope mount holder.

Classification: Standardization pending.

CHARACTERISTICS

Weight	4½ lb
Length	6⅞ in.
Width	9½ in.
Height	5⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-212-12.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 8 telescope mount holders per shipping container

Length	2 ft, ⅛ in.
Width	1 ft, 5 in.
Height	1 ft
Volume	2.9 cu ft
Gross weight	53.6 lb
Ship tons	0.07

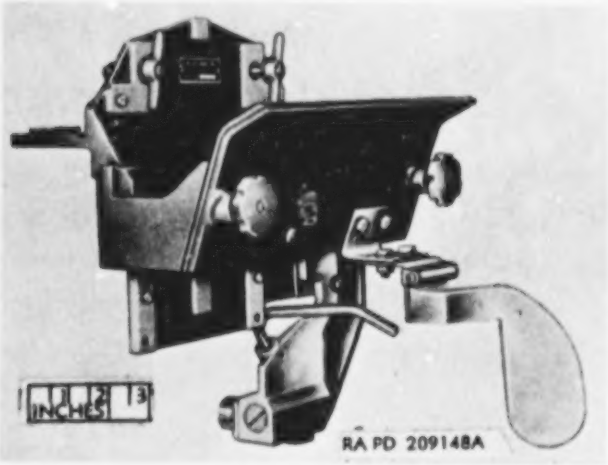
Outside Continental United States

Shipped 8 telescope mount holders per shipping container

Length	2 ft, ⅛ in.
Width	1 ft, 5 in.
Height	1 ft
Volume	2.9 cu ft
Gross weight	53.6 lb
Ship tons	0.07

References: TM 9-1240-291-35, TM 9-1240-291-35P.

MOUNT, TANK PERISCOPE: M93 (T176E1)



RA PD 209148A

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M93 (T176E1)		1240-765-2160

General

MOUNT, TANK PERISCOPE: M93 (T176E1), located at the gunner's station of the 76-mm gun tank M41, consists of a bracket, guard with headrest, and gun-ready signal light assembly. The mount, which is attached to the turret roof, is used to support the periscope M20. A guard assembly, with attached rightside half headrest, is provided at the rear of the mount to protect the observer if the periscope head is hit. Two guard knobs secure the guard assembly to the mount. The signal light is similar in design to M88 and T176E2, the receptacle being mounted in different location.

Differences among models

Data plate location

The identification plate is located on the bracket assembly.

Classification: Standard A.

CHARACTERISTICS

Weight	20 lb
Length	11 in.
Width	1 ft, 1 in.
Height	1 ft, 2 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-201-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscope mounts per shipping container

Length	2 ft, 4⅛ in.
Width	2 ft, 3 in.
Height	2 ft, 2½ in.
Volume	11.75 cu ft
Gross weight	182 lb
Ship tons	0.29

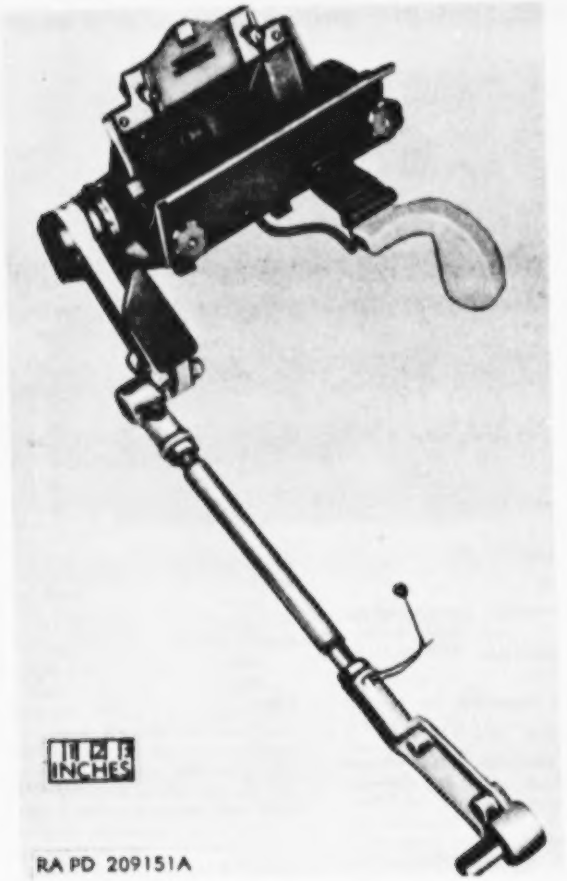
Outside Continental United States

Shipped 6 periscope mounts per shipping container

Length	2 ft, 4⅛ in.
Width	2 ft, 3 in.
Height	2 ft, 2½ in.
Volume	11.75 cu ft
Gross weight	182 lb
Ship tons	0.29

References: SNL F-358, TM 9-6055.

MOUNT, TANK PERISCOPE: M94 (T177E2)



RA PD 209151A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M94 (T177E2)		1240-765-2161

General

MOUNT, TANK PERISCOPE: M94 (T177E2), located at the commander's station of the TANK, COMBAT, FULL TRACKED: 76-mm gun, M41, consists of a bracket, guard with headrest, and gun-ready signal light assembly. The mount, which is attached to the turret roof, is used to support the PERISCOPE: M20. A guard assembly, with attached right-side half headrest, is provided at the rear of the mount to protect the observer if the periscope head is hit. Linkage on the left side of the bracket provides coupling to DRIVE, BALLISTICS: M4. Two guard knobs secure the guard assembly to the mount. The linkage is similar to the linkage of MOUNT, PERISCOPE: M89, with a slight difference in arm and connectors. The signal light is similar in design to M89.

Differences among models

Data plate location

The identification plate is located on the bracket assembly.

Classification: Standard A.

CHARACTERISTICS

Weight	30 lb
Length	1 ft, ½ in.
Width	1 ft, 3 in.
Height	1 ft, 6½ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-201-12.

INSTRUCTIONAL MATERIAL

Within Continental United States

Shipped 4 periscope mounts per shipping container

Length	1 ft, 9½ in.
Width	1 ft, 8¼ in.
Height	1 ft, 4⅝ in.
Volume	4.25 cu ft
Gross weight	157.5 lb
Ship tons	0.11

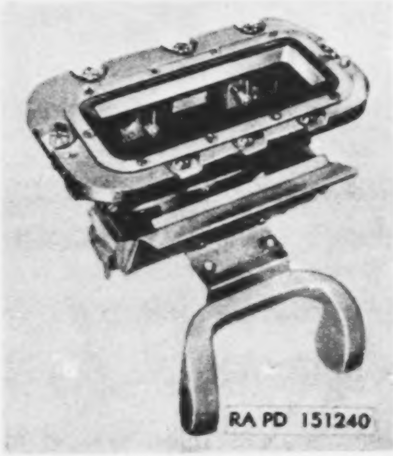
Outside Continental United States

Shipped 4 periscope mounts per shipping container

Length	1 ft, 9½ in.
Width	1 ft, 8¼ in.
Height	1 ft, 4⅝ in.
Volume	4.25 cu ft
Gross weight	157.5 lb
Ship tons	0.11

References: SNL F-255, TM 9-6055.

MOUNT, TANK PERISCOPE: M102 (T184E1) AND M102A1 (T184)


RA PD 151240

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M102 (T184E1)	....	1240-820-1054
M102A1 (T184)	....	1240-820-1167

General

MOUNT, TANK PERISCOPE: M102 (T184E1) or M102A1 (T184) is attached to the turret roof of the TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A1, M48A2 or M48C, and TRAINER, TANK GUNNERY: 90-mm gun, M20, and is used to support the PERISCOPE: M20A3 or M20A1 either for observing or for sighting in direct or indirect fire operation of the 90-mm gun. A guard, with headrest assembly, is provided to protect the observer should the head of the periscope be hit and is also used to provide support for the head of the observer while sighting through the periscope. A signal light assembly is attached to the front of the mount and serves as a ready to fire signal from the loader.

Differences among models

Basically M102 and M102A1 are identical. The difference is in the design of the bracket and clamping screw assembly. The bracket assembly of M102A1 has a rear mounting surface onto which an adapter is secured to support the signal light assembly, and M102 contains a bracket and clamping screw assembly which has provisions for directly mounting the signal light assembly without making use of an adapter.

Data plate location

The identification plate is located on the bracket.

Classification: Standard A.

CHARACTERISTICS

Length:	
M102	1 ft, $2\frac{7}{8}$ in.
M102A1	1 ft, $2\frac{5}{8}$ in.
Width:	
M102	$11\frac{5}{16}$ in.
M102A1	1 ft, $\frac{5}{8}$ in.
Height:	
M102	1 ft, $2\frac{1}{8}$ in.
M102A1	1 ft, $1\frac{5}{8}$ in.
Weight	38 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-254.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 periscope mount per shipping container

Length	1 ft, $5\frac{1}{4}$ in.
Width	$11\frac{3}{4}$ in.
Height	1 ft, 1 in.
Volume	2.3 cu ft
Gross weight	67 lb
Ship tons	0.05

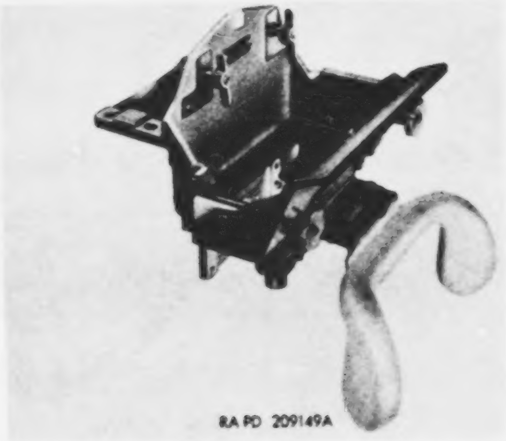
Outside Continental United States

Shipped 1 periscope mount per shipping container

Length	1 ft, $5\frac{1}{4}$ in.
Width	$11\frac{3}{4}$ in.
Height	1 ft, 1 in.
Volume	2.3 cu ft
Gross weight	67 lb
Ship tons	0.5

References: SNL F-378, TM 9-6011.

MOUNT, TANK PERISCOPE: M106 (T176E2)


RA PD 209149A

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M106 (T176E2)		1240-765-2075

General

MOUNT, TANK PERISCOPE: M106 (T176E2), located at the gunner's station of the TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 (T43E1), consists of a bracket, guard with headrest, and gun-ready signal light assembly. The mount, which is attached to the turret roof, is used to support the periscope M20 series. A guard, with attached full headrest, is provided at the rear of the mount to protect the observer if the periscope head is hit. Two guard knobs secure the guard assembly to the mount.

Differences among models

Data plate location

The identification plate is located on the bracket assembly.

Classification: Standard B (OTCM 36117).

CHARACTERISTICS

Weight	25 lb
Length	11 in.
Width	1 ft, 1 in.
Height	1 ft, 2¼ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscope mounts per shipping container

Length	2 ft, 4⅛ in.
Width	2 ft, 3 in
Height	2 ft, 2⅛ in.
Volume	11.75 cu ft
Gross weight	182 lb
Ship tons	0.29

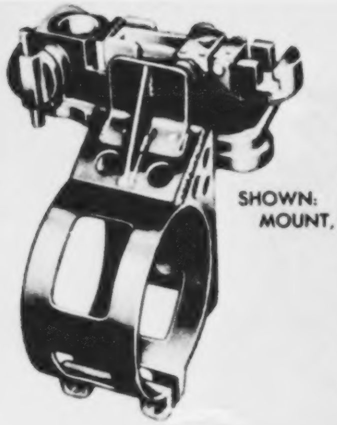
Outside Continental United States

Shipped 6 periscope mounts per shipping container

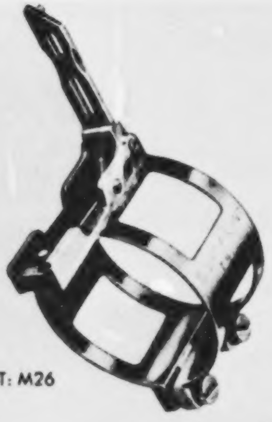
Length	2 ft, 4⅛ in.
Width	2 ft, 3 in.
Height	2 ft, 2⅛ in.
Volume	11.75 cu ft
Gross weight	182 lb
Ship tons	0.29

References: SNL F-358, TM 9-6055.

MOUNT, SIGHT: M74 OR M74C; SIGHT, FRONT: M26 (T91)



SHOWN:
MOUNT, SIGHT: M74



SHOWN:
SIGHT, FRONT: M26

ORD A1253

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M74	....	1290-759-7735
M74C	....	1240-759-7843
M26 (T91)	....	1290-769-2927

General

MOUNT, SIGHT: M74 or M74C, is clamped around the barrel of the 57-mm recoilless rifles M18, M18A1, and T15E16 and supports the TELESCOPE: M86F (M86C) used in aiming for direct fire. The TELESCOPE: M86F (M86C) is secured in position in the holder by means of a cam. In addition, two open sights are provided, of the jackknife folding leaf type, that can be held in a vertical position, by spring pressure, or can be snapped down. The sight mount M74 or M74C contains the rear leaf sight which has a peep hole, adjustable for elevation and windage, and is used in connection with the SIGHT, FRONT: M26 which is clamped around the rifle barrel at the muzzle end and forms the forward element of an open sight. When using the telescope, the open sights are folded down. The mount contains azimuth and elevation adjusting mechanisms for boresighting the instrument.

Differences among models

The sight mounts differ only in the engraved graduation lines and figures on the leaf. On the sight mount M74, the leaf is graduated and numbered from 1 through 11 representing hundreds of yards, while the M74C, the leaf is graduated and numbered from 1 through 12 representing hundred of yards.

Data plate location

Identification, including model number, is stamped on the bracket support of the sight mounts M74 and M74C, and on the clamp of the front sight M26.

Classification:

M74	Standard C
M74C	Standard C
M26	Standard C

CHARACTERISTICS

Elevating limit (rear leaf sight):	
M74	0 to 1,200 yd
M74C	0 to 1,200 yd
Windage limit	0 to 10 mils R and L (2-mil intervals).

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL C-73.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

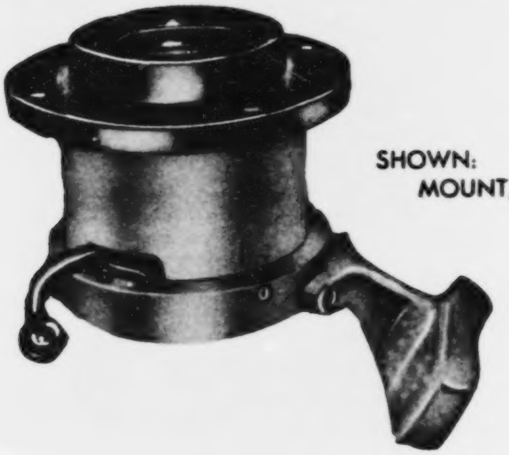
Shipped 72 sight mounts per shipping container	
Length	2 ft, 3 in.
Width	1 ft, 11½ in.
Height	1 ft, 9 in.
Volume	7.7 cu ft
Gross weight	184 lb
Ship tons	0.19
Shipped 240 front sights per shipping container	
Length	2 ft, 9 in.
Width	2 ft, 1¼ in.
Height	11¼ in.
Volume	5 cu ft
Gross weight	125 lb
Ship tons	0.13

Outside Continental United States

Shipped 72 sight mounts per shipping container	
Length	2 ft, 3 in.
Width	1 ft, 11½ in.
Height	1 ft, 9 in.
Volume	7.7 cu ft
Gross weight	184 lb
Ship tons	0.19
Shipped 240 front sights per shipping container	
Length	2 ft, 9 in.
Width	2 ft, 1¼ in.
Height	11¼ in.
Volume	5 cu ft
Gross weight	125 lb
Ship tons	0.13

References: SNL F-320, TM 9-1614.

MOUNT, TANK PERISCOPE: M104 (T195), M104A1 (T195E1), AND M104A2



SHOWN:
MOUNT, PERISCOPE: M104

ORD A1243

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M104 (T195)		1240-344-4680
M104A1 (T195E1)		1240-565-1091
M104A2		1240-777-6776

General

MOUNT, TANK PERISCOPE: M104 (T195), is used to mount SIGHT, PERISCOPE: M25 (T42) to provide means for sighting MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, in the tank commander's cupola of TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1. MOUNT, TANK PERISCOPE: M104A1 (T195E1) is used to mount SIGHT, PERISCOPE: M28 or M28C to provide means for sighting the caliber .50, heavy barrel Browning machinegun M2 in the tank commander's cupola of TANK, COMBAT, FULL TRACKED: 90 mm gun, M48A2 and M48A2C, and CARRIER, PERSONNEL, FULL TRACKED: armored, M59 (Nos. F2942 and up). MOUNT, TANK PERISCOPE: M104A2 is used to mount SIGHT, PERISCOPE: M28C to provide means for sighting MACHINEGUN, CALIBER .50: Browning, HB, M2, flexible, or MACHINEGUN, CALIBER .50: M85 in the tank commander's cupola of TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. The mount is fixed to the roof of the cupola above the caliber .50 machinegun ammunition box. It is designed to permit quick withdrawal and insertion of the sight. The sight projects through the mount and is secured within the barrel which is rotated manually to a locked position by a locking handle. An eccentric pin on the sight, provided to make azimuth boresight adjustments, locates in the eccentric adjusting pin slot on the bottom of the mount. A rubber-cushioned headrest permits steady viewing and aiming through the eyepiece of the periscope sight without danger of injury.

Differences among models

The M104 and M104A1 are identical with the exception that M104A1 has a retaining ring.

Data plate location

The identification plate is located on the collar.

Classification:

M104	Standard B (OTCM 37255)
M104A1	Standard A (OTCM 37119) Standard B for M60 and M60A1 tank (AMCTC 312)
M104A2	Standard A

CHARACTERISTICS

Weight:

M104	5 lb, 5 oz.
M104A1	

Height:

M104	6⅛ in.
M104A1	

PERFORMANCE

EQUIPMENT

Basic Issue Items:

M104	See ORD 7 SNL G-254
M104A1	See TM 9-7022
M104A2	See TM 9-2350-215-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 8 periscope mounts per shipping container

Length	1 ft. 1½ in.
Width	1 ft. 1 in.
Height	1 ft. 1⅜ in.
Volume	1.351 cu ft
Gross weight	50.55 lb
Ship tons	0.03

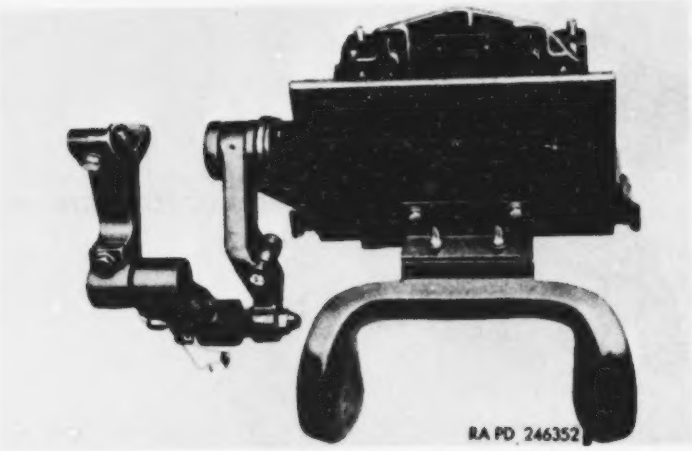
Outside Continental United States

Shipped 8 periscope mounts per shipping container

Length	1 ft. 1½ in.
Width	1 ft. 1 in.
Height	1 ft. 1⅜ in.
Volume	1.351 cu ft
Gross weight	50.55 lb
Ship tons	0.03

References: SNL F 388, TM 9-6175.

MOUNT, TANK PERISCOPE: M105 (T185)



RA PD 246352

Model	*Line item No.*	*Federal stock No.*
M105		1240-692-1524

General

MOUNT, TANK PERISCOPE: M105 (T185), is used to support PERISCOPE: M20A3C on RIFLE, SELF-PROPELLED: 106-mm, M50 *.

The periscope mount is equipped with an adjusting rod and various arm and connector assemblies which form the connecting linkage to the rifles' gun trunnion shaft. This linkage transmits rifle elevation movement to the head of installed periscope M20A3C through the drive coupling assembly. An attached level vial tube is provided to synchronize the mount to the rifle at zero elevation.

A guard and headrest assembly is provided to protect the observer, should the head of the periscope be hit; and it is also used to provide support for the head of the observer while sighting through the installed periscope.

Differences among models

Data plate location

The identification plate (nameplate) is located on the mounting bracket.

Classification: Standard A.

CHARACTERISTICS

Length	1 ft. 4¾ in.
Width (connecting linkage in normal installed position)	1 ft. 2½ in.
Height (connecting linkage in normal installed position)	11¼ in.
Weight (approx)	40 lb

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* For characteristics and data, see item in section 23.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per shipping container.

Length	1 ft. 10 in.
Width	1 ft. 5¼ in.
Height	1 ft. 1⅞ in.
Volume	3.23 cu ft
Gross weight	68 lb
Ship tons	0.08

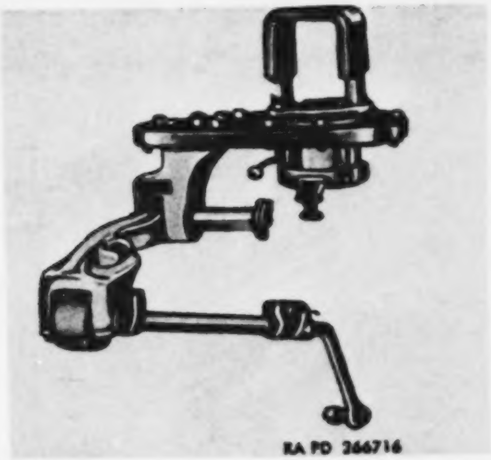
Outside Continental United States

Shipped 1 mount per shipping container.

Length	1 ft. 10 in.
Width	1 ft. 5¼ in.
Height	1 ft. 1⅞ in.
Volume	3.23 cu ft
Gross weight	68 lb
Ship tons	0.08

References: SNL F-396, TM 9-6187.

MOUNT, TANK PERISCOPE: M113



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M113		1240-776-2771

General

MOUNT, TANK PERISCOPE, M113, is used to support PERISCOPE: XM30 on TANK, COMBAT, SELF-PROPELLED: flamethrower, M67A1 or M30C on TANK, COMBAT, SELF-PROPELLED: flamethrower, M67A2.

The mount consists essentially of an adapter plate assembly and a link assembly. The lower end of the link assembly connects to the gun trunnion and the upper end connects to the connecting arm of the adapter plate assembly. The connecting arm is pinned to the output coupling of the mount mates with the input coupling of the periscope XM30, providing a direct drive from the flame gun trunnion to the periscope.

Differences among models

Data plate location

The identification plate (nameplate) is located on the adapter plate.

Classification: Standard A.

CHARACTERISTICS

Height (including headrest)	2 ft. 7 in.
Length (front to back, including linkage)	2 ft. 5⅜ in.
Width (side to side)	1 ft. 4⅞ in.
Weight	78 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 periscope mount per shipping container.

Length	2 ft. 4 in.
Width	1 ft. 11 in.
Height	11 in.
Volume	4.1 cu ft
Gross weight	120 lb
Ship tons	0.10

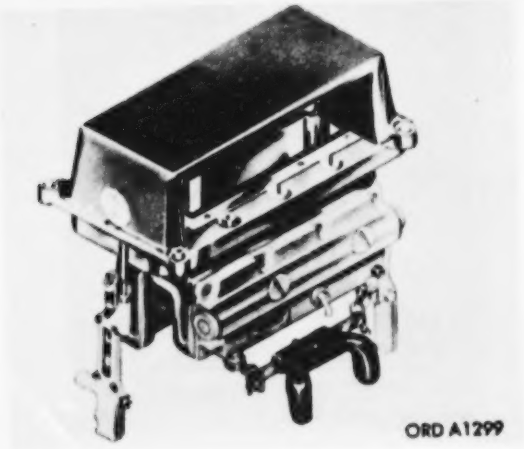
Outside Continental United States

Shipped 1 periscope mount per shipping container.

Length	2 ft. 4 in.
Width	1 ft. 11 in.
Height	11 in.
Volume	4.1 cu ft
Gross weight	120 lb
Ship tons	0.10

References: TM 9-1240-268-35, TM 9-1240-268-35P.

MOUNT, TANK PERISCOPE, M115 (T197)



ORD A1299

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M115		1240-676-2183

General

MOUNT, TANK PERISCOPE: M115 (T197), located at the gunner's station of TANK, COMBAT, FULL TRACKED: 105-mm gun, M60, consists of a mount, plate assembly, headrest assembly, and an exterior shield assembly. The periscope mount which is attached to the turret roof is used for securing PERISCOPE: M31 (T50), power unit assembly, and SIGHT, INFINITY: M44C to the turret. The exterior shield assembly provides protection for the exposed periscope head. An adjustable support and headrest is provided at the rear of the mount to support and protect the gunner.

Differences among models

Data plate location

The identification plate (nameplate) is located at the rear of the mount.

Classification: Standard B (AMCTC 312).

CHARACTERISTICS

Length	(approx) 1¼ in.
Width	(approx) 15 in.
Height	(approx) 18 in.
Weight	(approx) 85 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per shipping container

Length	1 ft, 5 in.
Width	1 ft, 2⅛ in.
Height	11⅝ in.
Volume	4.881 cu ft
Gross weight	126.50 lb
Ship tons	0.12

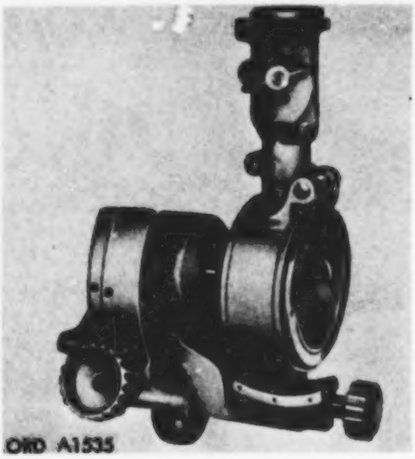
Outside Continental United States

Shipped 1 mount per shipping container

Length	1 ft, 5 in.
Width	1 ft, 2⅛ in.
Height	11⅝ in.
Volume	4.881 cu ft
Gross weight	126.50 lb
Ship tons	0.12

References: TM 9-1240-286-35, TM 9-1240-286-35P.

MOUNT, TELESCOPE: M21A1



ORD A1535

Secondary Item

Model	Line item No.	Federal stock No.
M21A1	....	1240-757-8596

General

MOUNT, TELESCOPE: M21A1, is used with TELESCOPE, PANORAMIC: M12A7H for laying in azimuth for direct and indirect fire on HOWITZER, LIGHT, TOWED: 105-mm, M101A1. This mount consists of a socket which supports the panoramic-telescope, a longitudinal leveling mechanism, a cross leveling mechanism and an azimuth compensating mechanism, which automatically corrects azimuth error caused when the weapon is elevated with the trunnions out of level. There is an index on the longitudinal leveling mechanism, and a matching pointer on a clamp. The mounting bracket has an extension with a hole for mounting the telescope mount on the trunnion of the weapon. Instead of scales and micrometers, there are indexes on the rocker and actuating arm to indicate 0° elevation. There is no angle of site mechanism. LIGHT, INSTRUMENT: M19 is used with the mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the cross level worm mechanism.

Classification: Standard A (OTCM 25702).

CHARACTERISTICS

Length	11⅝ in.
Width	11⅝ in.
Height	10⅛ in.
Weight	46 lb

Limits of operation:

Elevation	1,955.80 mils of arc
Cross level	533.40 mils of arc

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-325.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope mount per shipping container

Length	1 ft, 5⅝ in.
Width	1 ft, 2½ in.
Height	1 ft, 2¼ in.
Volume	2.122 cu ft
Gross weight	65.67 lb
Ship tons	0.05

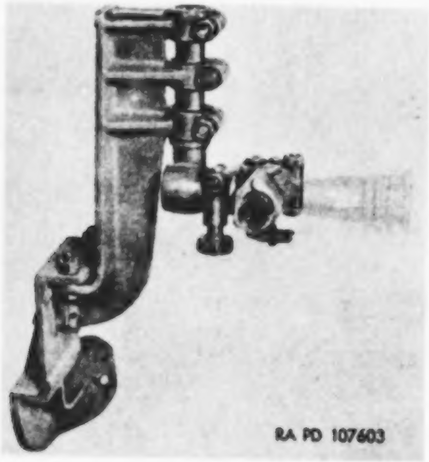
Outside Continental United States

Shipped 1 telescope mount per shipping container

Length	1 ft, 5⅝ in.
Width	1 ft, 2½ in.
Height	1 ft, 2¼ in.
Volume	2.122 cu ft
Gross weight	65.67 lb
Ship tons	0.05

References: SNL F-197, section 2, TM 9-6103, TM 9-1545.

MOUNT, TELESCOPE: M28



	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M28		1240-335-5053

General

MOUNT, TELESCOPE: M28, consists of a mounting bracket, spindle bracket, spindle assembly, elevation worm housing, telescope holder, and instrument light clamp. It provides for the mounting of TELESCOPE, ELBOW: M24A1 when it is used as direct sight on antiaircraft artillery, and has elevation and azimuth adjusting worm mechanisms for alining the telescope to the axis of the bore of the gun during boresighting. The telescope and mount move with the gun in azimuth or elevation. LIGHT, INSTRUMENT: M36, is used to illuminate the telescope reticle for night operation.

The telescope mount M28 is used with the CANNON, 90-MILLIMETER GUN: antiaircraft, M1A3 on the MOUNT, GUN: antiaircraft, 90-mm, M1A1.

Differences among models

Data plate location

The identification plate is located on the elevation worm housing.

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope mount per box.

Length	1 ft. 4 in.
Width	9 in.
Height	9 in.
Volume	0.8 cu ft
Gross weight	48 lb
Ship tons	0.02

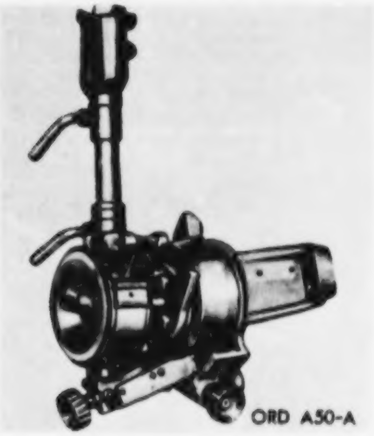
Outside Continental United States

Shipped telescope mount per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-224, TM 9-6101.

MOUNT, TELESCOPE: M30 (T38)



Model	*Line item No.*	*Federal stock No.*
M30 (T38)		1240-758-2078

General

MOUNT, TELESCOPE: M30 (T38) is used with TELESCOPE, PANORAMIC: M12A7C on GUN, HEAVY, MOTORIZED: 280-mm, M65, and on LAUNCHER, ROCKET: 762-mm, truck-mounted, M289, for laying the weapon in azimuth only. This mount, which is of the azimuth compensating type, is used to keep the line of sighting at a constant elevation regardless of the angle to which the weapon is elevated or depressed. The mount has rocker that is operated by means of the longitudinal leveling worm. The actuating arm, which has pads for seating a gunner's quadrant, is assembled in a hub mounted in the rocker and leveling worm housing. An extension for the telescope socket of the mount is for raising the telescope when necessary for the line of sight to clear the weapon shield. This mount does not have scales or micrometers, but has an index on the cross leveling mechanism and a matching pointer on the segment. This mount does not use an angle of site mechanism. LIGHT, INSTRUMENT: M22 or M35, is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the housing.

Classification: Standard B (OTCM 36845).

CHARACTERISTICS

Length
Width
Height
Weight

Limits of operation:

Elevation	640.08 mils of arc
Cross level	355.50 mils of arc
Cant correction	213.33 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-338-1.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Domestic Pack

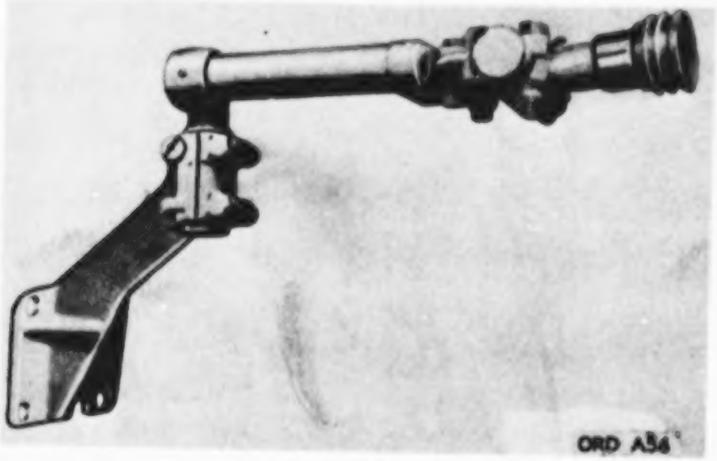
Shipped mount per wood box
Length
Width
Height
Volume
Gross weight
Ship tons

Oversea Pack

Shipped mount per wood box
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F 223, TM 9-6103

MOUNT, TELESCOPE: M54



Model	*Line item No.*	*Federal stock No.*
M54		1240-757-8424

General

MOUNT, TELESCOPE: M54, is used with TELESCOPE, ELBOW: M26A1 on MOUNT, GUN: M1A2 for CANNON, 90 MILLIMETER GUN: M1A2 or M1A3 for aiming in azimuth for antimechanized fire. The mount consists principally of a mounting bracket, spindle assembly, elevation worm housing, and telescope holder. The mount is adjusted to the line of sight of the axis of the bore of the gun by means of worm adjusting mechanisms. The mount is of the rigidly mounted single-purpose type. It has elevation and azimuth adjusting worm mechanisms. When a telescope mount on the azimuth side is secured in place, the movement of the gun in azimuth will move the telescope and mount in azimuth. The telescope mount on the elevation side will operate in the same manner. The mount is used for aiming the gun in azimuth for antimechanized fire. LIGHT, INSTRUMENT: M36, is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the mounting bracket.

Classification: Standard (OTCM 28367).

CHARACTERISTICS

Length ....
Width ....
Height ....
Weight ....

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-28.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Domestic Pack

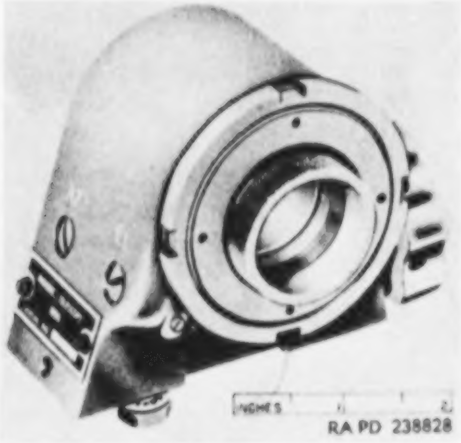
Shipped mount per wood box
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Oversea Pack

Shipped mount per wood box
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-224, TM 9-6101.

MOUNT, TELESCOPE: M90 (T183)



RA PD 238828

Secondary item

Model	*Line item No.*	*Federal stock No.*
M90 (T183)	....	1240-344-4689

General

MOUNT, TELESCOPE: M90 (T183), consists of a mount, housing a socket and drive worm assembly, a cant correction knob, and azimuth and elevation adjustment worms. It provides for the mounting of the TELESCOPE, ELBOW: M90D when it is used as direct sight. The slotted and tapered objective end of the telescope fits into the slotted, keyed and tapered bore of the socket incorporated in the mount. A round nut is provided to lock the telescope in place. When the cant correction knob in the mount is turned, the mount, through the combined rotations of the drive worm and the gear segment of the socket, will provide cant correction to the elbow telescope. When the azimuth adjustment worm is turned, it will deflect the telescope reticle cross to either right or left of a vertical target line. When the elevation adjustment worm is turned, it will deflect the telescope reticle cross above or below a horizontal target line.

The telescope mount M90 is used with the RIFLE, 106 MILLIMETER: recoilless, M40A1 or M40A1C.

Differences among models

Data plate location

The identification plate is located on the mount (housing).

Classification: Standard A.

CHARACTERISTICS

Cant correction knob:	
Range:	
Right	21 deg
Left	21 deg
Turns:	
Right	3½
Left	3½
Boresighting adjustment worms:	
Azimuth deflection:	
Right	11 mils
Left	11 mils
Elevation deflection:	
Right	11 mils
Left	11 mils
Length	$3\frac{11}{16}$ in.
Width	$2\frac{9}{16}$ in.
Height	$2\frac{11}{16}$ in.
Weight	3 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 48 telescope mounts per shipping container

Length	1 ft, 7⅝ in.
Width	1 ft, 3⅝ in.
Height	1 ft, 2½ in.
Volume	2.62 cu ft
Gross weight	188.5 lb
Ship tons	0.07

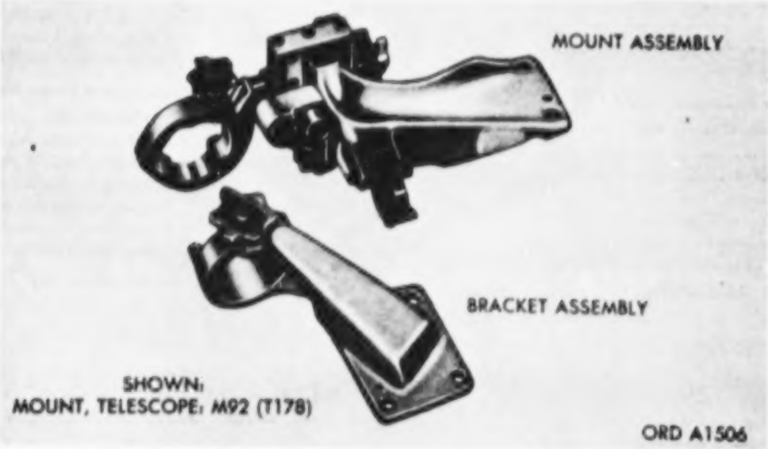
Outside Continental United States

Shipped 48 telescope mounts per shipping container

Length	1 ft, 7⅝ in.
Width	1 ft, 3⅝ in.
Height	1 ft, 2½ in.
Volume	2.62 cu ft
Gross weight	188.5 lb
Ship tons	0.07

References: SNL F-392, TM 9-6141.

MOUNT, TELESCOPE: M92 (T178) AND M92A1 (T178E1)



Secondary item

Model	*Line item No.*	*Federal stock No.*
M92 (T178)		1240-344-4660
M92A1 (T178E1)		1240-344-4661

General

MOUNT, TELESCOPE: M92 (T178) and M92A1 (T178E1) provide support of TELESCOPE: M97 (T156) series parallel to the line-of-sight of CANNON, 76 MILLIMETER GUN: M32 (T91E3). Each telescope mount consists of two parts, a bracket assembly and a mount assembly. The bracket assembly is mounted on the gun shield adapter mounting pad and the mount assembly is mounted on the right side of the gun near the breech. An azimuth index knob and an elevation index knob provide for azimuth and elevation adjustments of ± 2 mils on the mount assemblies to allow adjustment of the telescope in boresighting and synchronizing the fire control instruments. Locking levers are provided to lock the azimuth and elevation adjusting components in position when boresighting and synchronization of all fire control instruments is achieved.

Telescope mount M92 (T178) is used on TANK, COMBAT, FULL TRACKED: 76-mm gun, M41 (T41E1) and TRAINER, TANK GUNNERY: 76-mm gun, M17. Telescope mount M92A1 (T178E1) is used on TANK, COMBAT, FULL TRACKED: 76-mm gun, M41A1 (T41E2) and TRAINER, TANK GUNNERY: 76-mm gun, M17A1.

Differences among models

The bracket assemblies for telescope mounts M92 and M92A1 are identical. Their mount assemblies differ in the bracket design. The mount assembly of telescope mount M92 is positioned on top of the gun; whereas, the mount assembly of telescope mount M92A1 is positioned on the side of the elevating mechanism, due to the design of new turret elevating and traversing mechanisms used in TANK, COMBAT, FULL TRACKED: 76-mm gun, M41A1 (T41E2).

Data plate location

The identification plate is located on the housing of the mount assembly.

Classification: Standard A.

CHARACTERISTICS

Length:	
Bracket assembly	**11½ in.**
Mount assembly	**10½ in.**
Width:	
Bracket assembly	8¼ in.
Mount assembly:	
M92	7½ in.
M92A1	6⅝ in.
Height:	
Bracket assembly	6 in.
Mount assembly:	
M92	7½ in.
M92A1	12 in.
Weight:	
Bracket assembly	7 lb
Mount assembly:	
M92	20 lb
M92A1	17 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Bracket assembly

Within Continental United States

Shipped bracket assemblies per box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped bracket assemblies per box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Mount assembly, MOUNT TELESCOPE: M92

Within Continental United States

Shipped mount assemblies per box.
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped mount assemblies per box.
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Mount assembly, MOUNT, TELESCOPE: M92A1

Within Continental United States

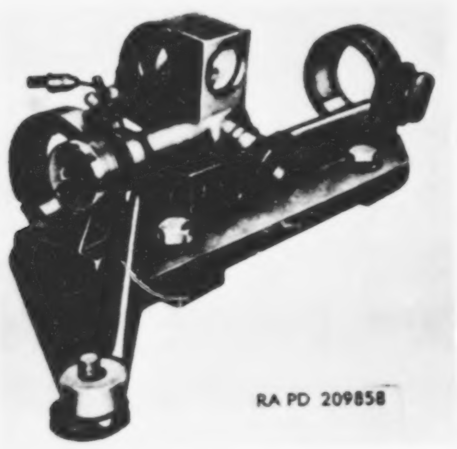
Shipped mount assemblies per box.
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped mount assemblies per box.
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: TM 9-6049, TM 9-1290-231-35P.

MOUNT, TELESCOPE: M96 (T189)



RA PD 209858

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M96 (T189)		1240-344-4664

General

MOUNT, TELESCOPE: M96 (T189), supports and alines TELESCOPE: M93 (T153) for direct fire sighting on the HOWITZER, SELF-PROPELLED, FULL TRACKED: 155-mm, M44 (T194) or M44A1. The telescope mount M96 (T189) is bolted to the howitzer mount and moves in elevation and azimuth with the weapon. The telescope is secured to the telescope mount at three points by means of the front holder, the clamp assembly, and the locking screw knob and locking screw. The cant corrector assembly connects to the telescope by the cant corrector coupling, and centers the bubble in the level vial, and positions the reticle of the telescope so that the etchings are horizontal whenever the trunnions of the howitzer mount are canted. The cant corrector is manually operated by rotating the level vial drive worm (cant corrector) knob and is capable of compensating for cant angles from 0° to 15° in either direction.

Differences among models

Data plate location

The identification plate (nameplate) is located on the telescope mount bracket.

Classification: Standard A.

CHARACTERISTICS

Maximum overall:	
Length	22¼ in.
Width	10¼ in.
Height	9 in.
Weight	47½ lb
Level vial rotation (cant correction):	
Right	0° to 15°
Left	0° to 15°

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7004.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

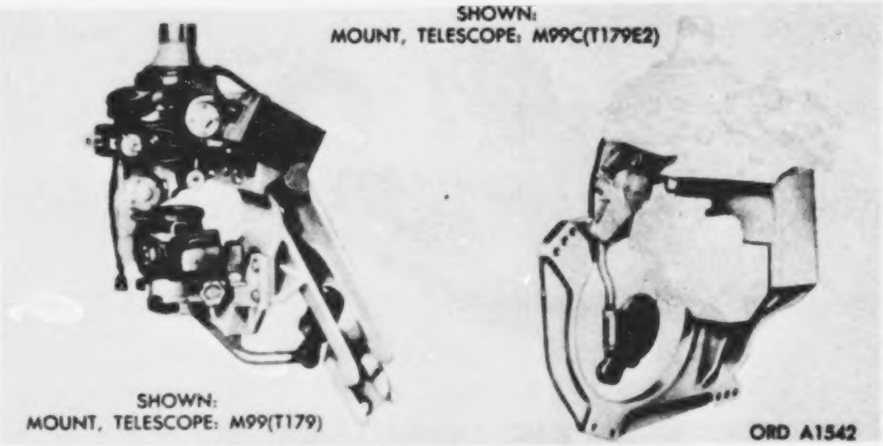
Shipped 3 telescope mounts per shipping container	
Length	3 ft, 10⅝ in.
Width	2 ft, 4⅛ in.
Height	1 ft, ⅛ in.
Volume	9.3 cu ft
Gross weight	200 lb
Ship tons	0.23

Outside Continental United States

Shipped 3 telescope mounts per shipping container	
Length	3 ft, 10⅝ in.
Width	2 ft, 4⅛ in.
Height	1 ft, ⅛ in.
Volume	9.3 cu ft
Gross weight	200 lb
Ship tons	0.23

References: SNL F-371, TM 9-6037.

MOUNT, TELESCOPE: M99 (T179), M99C (T179E2), M99A1 (T179E4), AND M99A1C (T179E5)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M99 (T179)		1240-344-4665
M99C (T179E2)		1240-344-4666
M99A1 (T179E4)		1240-344-4667
M99A1C (T179E5)		1240-546-9718

General

MOUNT, TELESCOPE: M99 (T179), M99C (T179E2), M99A1 (T179E4) and M99A1C (T179E5) is azimuth compensating type mount. Each mount, when cross and longitudinally leveled, corrects for azimuth error resulting when the weapon is elevated with the trunnions out of level (canted). The telescope mount consists of the trunnion arm, long link, and bellcrank assemblies of the linkage system; the gimbal with the telescope housing assembly, cant correction mechanism which provides mounting for the telescope and includes the counter; the azimuth assembly which includes level vials; and the electrical installation which provides reticle illumination.

Telescope mount M99 (T179) or M99A1 (T179E4) supports TELESCOPE, PANORAMIC: M100 (T149E1) and is used with the telescope to lay HOWITZER, SELF-PROPELLED, FULL TRACKED: 105-mm, M52 (T98E1) or M52A1 for indirect fire. It also supports the telescope mounting bracket of MOUNT, TELESCOPE: M100 (T169E1) which with TELESCOPE: M101 (T150E1) is used to lay the howitzer for direct fire. Telescope mount M99C (T179E2) or M99A1C (T179E5) supports TELESCOPE, PANORAMIC: M100 (T149E1) and is used with the telescope to lay the GUN, SELF-PROPELLED, FULL TRACKED: 155-mm, M53 (T97) and the HOWITZER, SELF-PROPELLED, FULL TRACKED: 8-inch, M55 (T108) for indirect fire.

Differences among models

Telescope mounts M99 (T179) and M99C (T179E2) are basically the same, design differences exist between the supports and the trunnion arm, long link, and bellcrank assemblies. The major difference between the M99 (T179) and M99A1 (T179E4) is the azimuth assembly. Telescope mount M99 (T179) employs a curved support assembly; and on the M99A1 (T179E4), the curved support is replaced by a worm and nut mechanism. The M99A1C (T179E5) is similar to the M99C (T179E2) and has different wiring harness assembly.

Data plate location

The identification plate (nameplate) is located on the azimuth assembly bracket.

Classification:

M99 (T179)	Standard A
M99C (T179E2)	Standard A
M99A1 (T179E4)	Standard A
M99A1C (T179E5)	Standard A

CHARACTERISTICS

Length:	
M99 (T179)	32 in.
M99C (T179E2)	24⅛ in.
Width	22 in.
Height	39⅛ in.
Weight:	
M99 (T179)	338 lb
M99C (T179E2)	478 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: M99 and M99A1—See TM 9-7204.
M99A1C—See TM 9-2350-210-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Telescope mount M99 or M99A1

Within Continental United States

Shipped	1 telescope mount per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 telescope mount per box

Length

Width

Height

Volume

Gross weight

Ship tons

Telescope mount M99C or M99A1C

Within Continental United States

Shipped 1 telescope mount per box

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped 1 telescope mount per box

Length

Width

Height

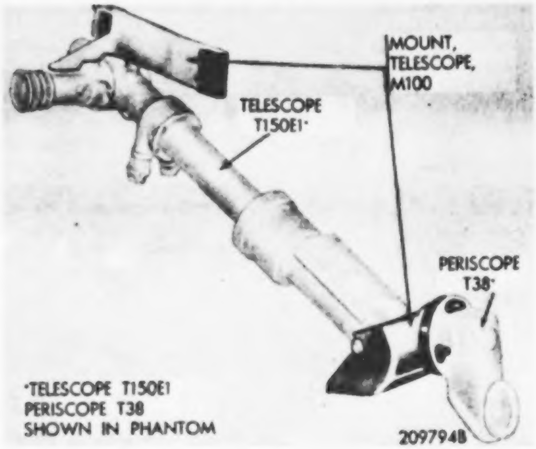
Volume

Gross weight

Ship tons

References: SNL F-372, TM 9-6039.

MOUNT, TELESCOPE: M100 (T169E1)



*TELESCOPE T150E1
PERISCOPE T38
SHOWN IN PHANTOM

	Secondary item	
Model	***Line item No.***	***Federal stock No.***
M100 (T169E1)	----------------------------	1240-344-4670

General

MOUNT, TELESCOPE: M100 (T169E1), consists of two major components, a telescope mounting bracket and a mount yoke. The telescope mounting bracket supports the eyepiece end of TELESCOPE: M101 (T150E1), while the mount yoke supports the objective end and PERISCOPE: M23 (T38). Together they are used as a unit for direct fire with the HOWITZER, SELF PROPELLED, FULL TRACKED: 105-mm, M52 (T98E1) or M52A1. The telescope mounting bracket is secured to the bracket of MOUNT, TELESCOPE: M99 (T179). A locking plunger, operated by the plunger locking handle, locks the eyepiece end of the telescope to the telescope mounting bracket at the gunner's eye level. The mount yoke is secured to the howitzer cradle and moves in elevation with the weapon. The telescope locking handle provides for locking of the objective end of the telescope with the mount yoke. Periscope guides, extending from the periscope mounting plate, position and secure the periscope to the yoke.

Differences among models

Data plate location

The identification plate (nameplate) is located on the telescope mounting bracket.

Classification: Standard A.

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7204.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

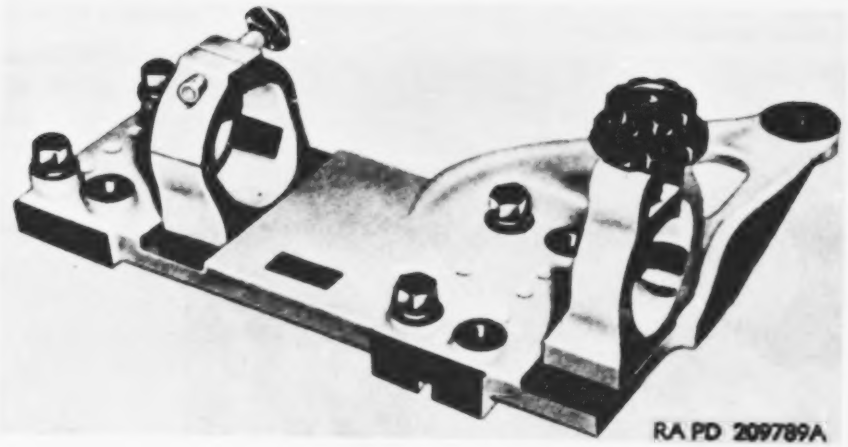
Shipped per
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped per
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL F-380, TM 9 6035.

MOUNT, TELESCOPE: M101 (T181)



RA PD 209789A

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M101 (T181)		1240-344-4671

General

MOUNT, TELESCOPE: M101 (T181), consists of the front and rear clamp assemblies secured to the support. A spring-loaded plunger in the front clamp assembly secures the front of the telescope objective tube, and a threaded shaft and shoe in the rear clamp assembly secures the rear of the objective tube. The cant corrector and ocular portions of the telescope are supported by the outrigger, which is an integral part of the support casting.

Telescope mount M101 (T181) supports and alines TELESCOPE: M99 (T159) or M99C (T159E1) for direct fire sighting on the GUN, SELF-PROPELLED, FULL TRACKED: 155-mm, M53 (T97) and the HOWITZER, SELF-PROPELLED, FULL TRACKED: 8-inch, M55 (T108), respectively.

Differences among models

Data plate location

The identification plate (nameplate) is located on the support.

Classification: Standard A.

CHARACTERISTICS

Length	$17\frac{9}{16}$ in.
Width, side pads to outrigger	$13\frac{5}{16}$ in.
Height, to top of upper knob	$8\frac{3}{4}$ in.
Weight	45 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-210-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 3 telescope mounts per shipping container

Length	2 ft, $8\frac{5}{8}$ in.
Width	1 ft, 9 in.
Height	1 ft, $4\frac{1}{2}$ in.
Volume	6.55 cu ft
Gross weight	200 lb
Ship tons	0.16

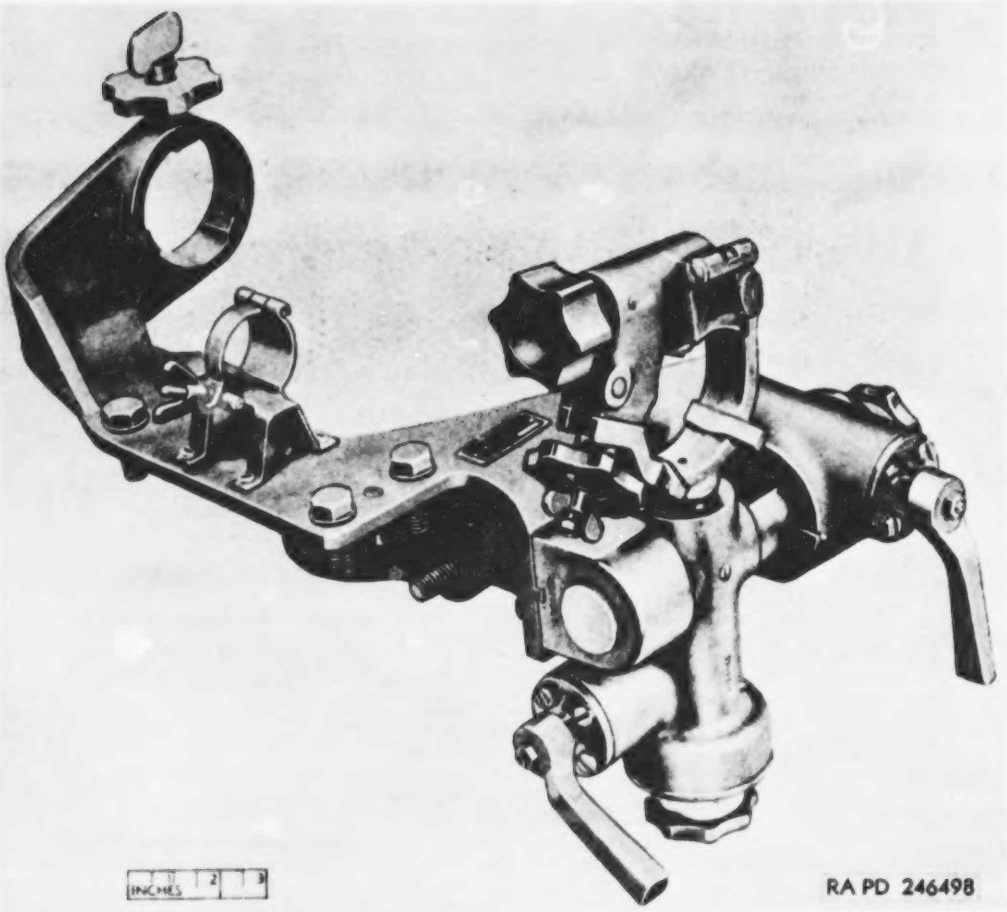
Outside Continental United States

Shipped 3 telescope mounts per shipping container

Length	2 ft, $8\frac{5}{8}$ in.
Width	1 ft, 9 in.
Height	1 ft, $4\frac{1}{2}$ in.
Volume	6.55 cu ft
Gross weight	200 lb
Ship tons	0.16

References: SNL F-381, TM 9-6041.

MOUNT, TELESCOPE: M111 (T219)



RA PD 246498

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M111 (T219)		1240-593-9976

General

MOUNT, TELESCOPE: M111 (T219) attaches to the 90-mm gun mount M88 on the 90-mm full track self-propelled gun M56 (T101) and is used to support TELESCOPE: M104 (T186) or M104C for sighting and ranging on targets. The telescope mount elevates and deflects with the weapon, maintaining a constant relative position between centerlines of the gun tube and the telescope. Two boresight knob assemblies are provided to enable making azimuth and elevation boresight adjustments. The mount supports the LIGHT, INSTRUMENT: M36 which illuminates the reticle patterns of the TELESCOPE: M104 (T186) or M104C during night operation.

Differences among models

Data plate location

The identification plate is located on the top of the mount.

Classification: Standard A (OTCM 37695).

CHARACTERISTICS

Weight	40 lb
Length	19⅝ in.
Width	12⅛ in.
Height	12⅛ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-213-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope mount per shipping container.

Length	1 ft, 11 in.
Width	9 in.
Height	1 ft
Volume	1.4 cu ft
Gross weight	39 lb
Ship tons	0.03

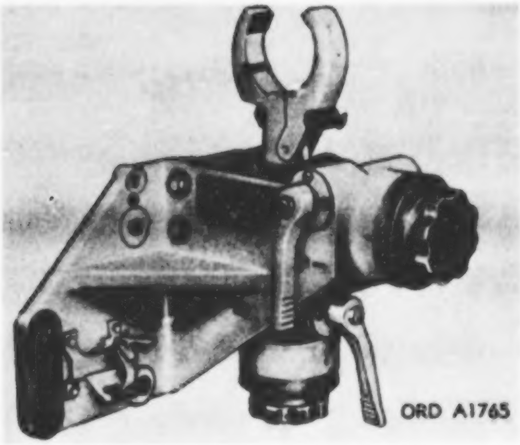
Outside Continental United States

Shipped 1 telescope mount per shipping container.

Length	1 ft, 11 in.
Width	9 in.
Height	1 ft
Volume	1.4 cu ft
Gross weight	39 lb
Ship tons	0.03

References: TM 9-1290-269-34, TM 9-1290-269-35P, TM 9-1290-269-50.

MOUNT, TELESCOPE: M114 (T199)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Secondary Item

Model	*Line item No.*	*Federal stock No.*
M114		1240-676-2176

General

MOUNT, TELESCOPE: M114 (T199), supports TELESCOPE: articulated, M105C for use as the secondary direct fire control system in TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. The mount consists of a base housing assembly, and adjustable slide assembly, and an adjustable holder assembly capable of vertical movement within the slide. Boresight knobs and scale dials for adjusting the telescope in deflection and elevation, and locking mechanisms for holding the adjustments constitute the operating components of the mount.

Differences among models

Data plate location

Data plate is located on the upper main bracket.

Classification: Standard A.

CHARACTERISTICS

Length	(approx) 10⅝ in.
Width	(approx) 10⅛ in.
Height	(approx) 13 in.
Weight	(approx) 48 lb

Boresight knob scales—graduated in 0.1-mil increments, numbered every mil.

Elevation scale	0.5 to 5.5 mils
Deflection scale	0.5 to 5.5 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope mount per shipping container.

Length	1 ft, 8⅛ in.
Width	1 ft, 4⅛ in.
Height	1 ft, 2½ in.
Volume	2.728 cu ft
Gross weight	74.5 lb
Ship tons	0.07

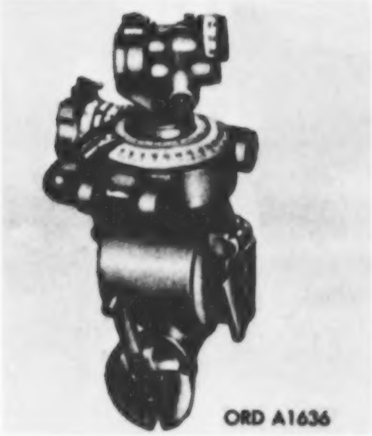
Outside Continental United States

Shipped 1 telescope mount per shipping container.

Length	1 ft, 8⅛ in.
Width	1 ft, 4⅛ in.
Height	1 ft, 2½ in.
Volume	2.728 cu ft
Gross weight	74.5 lb
Ship tons	0.07

References: TM 9-1240-285-35, TM 9-1240-285-35P.

MOUNT, TELESCOPE: XM117



Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM117		1240-691-5585

General

MOUNT, TELESCOPE: XM117, mounts TELESCOPE, ELBOW: XM107 and is attached to the battle group lightweight weapon system XM28 or battle group heavy weapon system XM29 as a unit by means of HOLDER, TELESCOPE MOUNT: XM5 or XM6.

The telescope mount consists of three main parts. The lower part contains a horizontal axis, a male dovetail, a locking device, and an elevation knob with scales. The center part has a vertical axis, azimuth knob, stationary and slippable scales and a pair of cross-level vials. The upper part which supports the elbow telescope is comprised of a telescope support and horizontal and vertical axis. The telescope support has an open sight and an angle-of-site-knob with scales.

Differences among models

Data plate location

Data plate is located on main body.

Classification: Standardization pending.

CHARACTERISTICS

Length	4⅝ in.
Width	5⅛ in.
Height	7⅝ in.
Weight	4 lb, 10 oz
Dial graduations:	
Coarse elevation scale	−300 to +800 mils
Micrometer elevation scale	0 to 100 mils
Coarse azimuth scale	0 to 6,400 mils
Micrometer azimuth scale	0 to 100 mils
Coarse deflection slip scale	0 to 6,400 mils
Micrometer deflection slip scale	0 to 100 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1000-209-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 telescope mounts per shipping container.

Length	2 ft, 8⅝ in.
Width	1 ft, 3 in.
Height	10⅝ in.
Volume	2.59 cu ft
Gross weight	61.6 lb
Ship tons	0.06

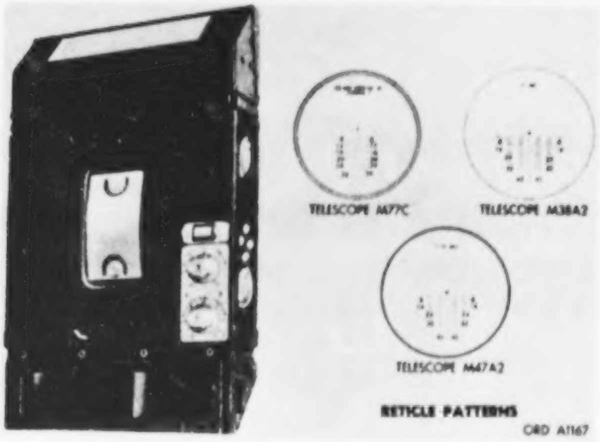
Outside Continental United States

Shipped 24 telescope mounts per shipping container.

Length	2 ft, 9 in.
Width	2 ft, 4 in.
Height	1 ft, 2 in.
Volume	7.62 cu ft
Gross weight	181 lb
Ship tons	0.19

References: TM 9-1240-284-35, TM 9-1240-284-35P.

PERISCOPE, TANK: M4A1



RETICLE PATTERNS

ORD A1167

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M4A1		1240-673-7492

General

PERISCOPE, TANK: M4A1, is a tank periscope equipped with a built-in telescope and is used for gun sighting and observation. The periscope is so mounted that the upper window extends above the tank body. The periscope consists of the head, body, elbow, and a solid glass prism for both the head and the elbow. The prisms are used to reflect the image to the observer's eye position. Adjustment knobs with deflection graduations which permit easy and rapid boresighting are provided. The reticle of the telescope is used for accurate gun sighting. The head is made of shatterable plastic. Heads are readily replaceable by substituting a spare. A record of the vertical and lateral adjustment is entered on each spare head. When a shattered head is replaced, the adjustment data recorded on the spare head is used to make the required adjustment in the periscope without the need of again going through the operation of boresighting.

The periscope M4A1 containing TELESCOPE: M38A2 is used with 75-mm combination gun mounts M34 and M34A1; containing TELESCOPE: M47A2 is used with 76-mm gun mount M1; and containing TELESCOPE: M77C is used with 105-mm combination gun mounts M52 and M71.

Differences among models

Data plate location

Data plate is located on the body assembly.

Classification: Obsoletion pending.

CHARACTERISTICS

Periscope offset	8⅝ in.
Deflection (horiz.) for boresighting	30-0-30 mils
Elevation (vertical) for boresighting	30-0-30 mils
Magnification (telescope)	1.44 power

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 periscopes per box

Length	2 ft, 11 in.
Width	1 ft, 2 in.
Height	9 in.
Volume	2.5 cu ft
Gross weight	92 lb
Ship tons	0.06

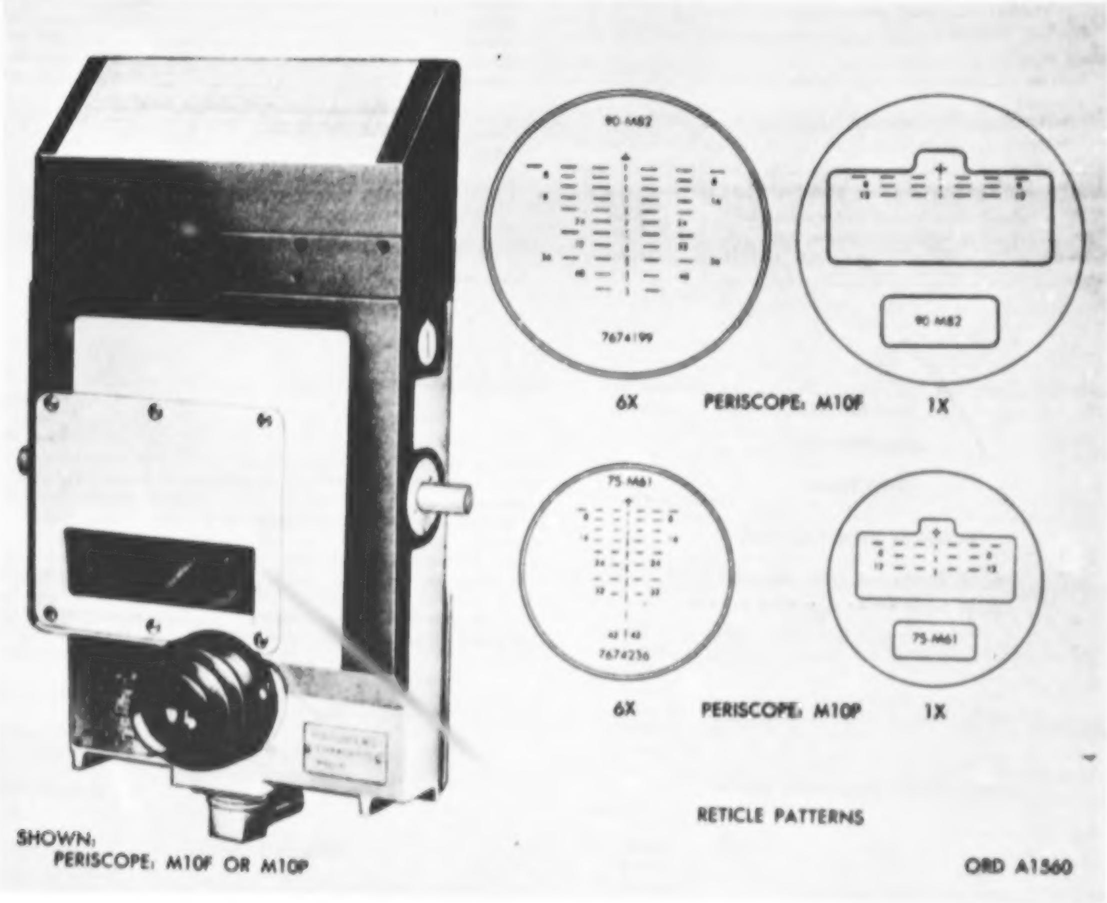
Outside Continental United States

Shipped periscopes per box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-235, TM 9-6118.

PERISCOPE: M10F AND M10P



ORD A1560

Secondary item

Model	*Line item No.*	*Federal stock No.*
M10F		1240-758-2095
M10P		1240-759-7753

General

PERISCOPE: M10F or M10P is an optical instrument that has an offset line-of-sight to enable an opertator to view the surrounding terrain without exposing himself. It is provided with two optical systems: one having 1-power (1X), for observation of general terrain and for sighting on near targets, and the other having 6-power (6X), for sighting on distant targets, with a porro-prism erecting system and a focusing eyepiece, built into the body of the periscope, instead of being incorporated as a separate telescope within the periscope. The periscope M10F or M10P consists of the body assembly which is a cast aluminum body containing the lower prisms and reticles of both optical systems and lenses, and the head assembly consisting of a molded, shatterable plastic head containing a 90° prism. Both optical systems are provided with graduated reticles. Vertical and lateral adjusting mechanisms operated by knobs are provided for making adjustments for alining the reticles to the bore of the gun. Illumination of the reticle patterns is provided. The periscope is secured to the turret of the vehicle and its line-of-sight elevates with the weapon.

Differences among models

Periscopes M10F and M10P are identical except for their reticle patterns.

Data plate location

The identification plate (nameplate) is located on the body.

Classification: Unclassified.

CHARACTERISTICS

Magnification:	
Near sight	1X
Distant sight	6X
Diopter adjustments	±2⅛ diopters
Field of view:	
1-power:	
Horizontal	42°, 10 min
Vertical	8°, 10 min
6-power, horizontal	10°, 20 min
Reticle range:	
1-power	0 to 1,200 yd
6-power:	
M10F	0 to 4,400 yd
M10P	0 to 4,200 yd
Reticle deflections	R80-0-80L mils
Center-to-center distance between head prism and eyepiece	9⅛ in.
Length	18³¹⁄₃₂ in.
Width	8⅝ in.
Thickness	5²⁷⁄₃₂ in.
Weight	11⅛ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

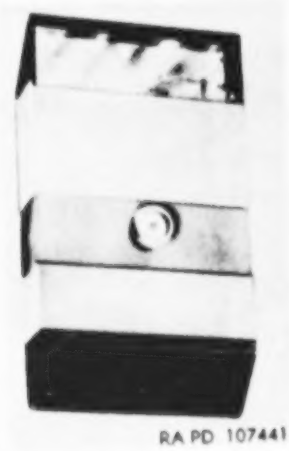
Shipped	2 periscopes per box
Length	1 ft, 11 in.
Width	1 ft, 7 in.
Height	1 ft
Volume	3.0 cu ft
Gross weight	66 lb
Ship tons	0.08

Outside Continental United States

Shipped	periscopes per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-235, TM 9-6119.

PERISCOPE: M12



RA PD 107441

Model	*Line item No.*	*Federal stock No.*
M12		

General

PERISCOPE: M12 is an optical instrument that has an offset line-of-sight to enable an operator to view the surrounding terrain without exposing himself. It is of the solid plastic type, single power of magnification, with second surface mirrors cemented at a 45° angle in the head and elbow, and is waterproof. Periscope M12 has only the mirrors and does not have windows. It is supported by a metal band in either a viewing or a retracted position in a periscope holder which is secured to the body of the vehicle and can be elevated, depressed, or rotated in azimuth.

The periscope M12 is used with the LANDING VEHICLE, TRACKED: MK 4, LVT (4), w/e.*

Differences among models

Data plate location

The identification data are stamped on the band.

Classification

CHARACTERISTICS

Field of view:	
Vertical	25°
Horizontal	90°
Length	11⅛ in.
Width	6½ in.
Thickness	2⅛ in.
Weight	6½ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

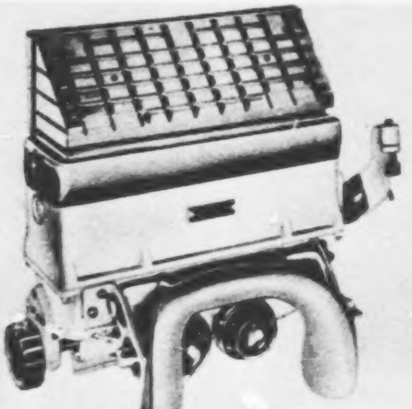
Outside Continental United States

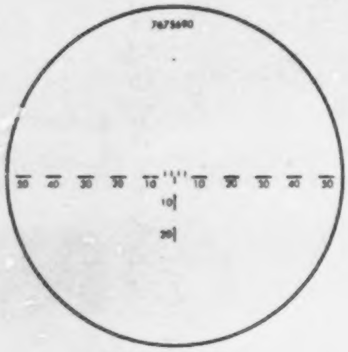
Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1608E.

* For characteristics and data see item in section 21.

PERISCOPE, TANK: M15A1





RETICLE PATTERN

ORD A1769

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M15A1		1240-759-7757

General

PERISCOPE, TANK: M15A1 is an optical instrument that has an offset line-of-sight to enable an operator to view the surrounding terrain without exposing himself. It is a binocular-type instrument having two built-in optical systems, a one-power system for wide close-in vision of the terrain, and a 7-power system for stereoscopic long range vision, having two eyepieces with individual focusing adjustments. A porro-prism erecting system and optical components are built into the body of the periscope, instead of being incorporated as a separate telescope within the periscope. The periscope M15A1 consists of two major parts. The body assembly contains the lower prisms, optical components and reticle of the 7-power system, and the observation window and the plain mirror of the 1-power system. The head assembly contains the head prism. Located on the side of the body assembly is an eccentric mechanism which locks the head assembly in position. A reticle, placed in the image plane of the left objective of the 7-power system, is graduated in mils for measuring lateral and vertical deflections, and may be illuminated by LIGHT, INSTRUMENT: M33. An adjustable headrest is provided for the convenience of the observer. Desiccating capsules containing silica gel are inserted in the prism housing to absorb moisture. Indicator windows facilitate examination of the silica gel.

The periscope M15A1 is used by the tank commander for observation purposes and for controlling and adjusting fire. Periscope M15A1 is used with GUN, SELF-PROPELLED, FULL TRACKED: 155-mm, M53 (T97): HOWITZER, SELF-PROPELLED, FULL TRACKED: 105-mm, M52 (T98E1) or M52A1; and HOWITZER, SELF-PROPELLED, FULL TRACKED: 8-inch, M55 (T108).

Differences among models

Data plate location

The identification plate (nameplate) is located on the body assembly.

Classification: Standard A.

CHARACTERISTICS

Magnification:	
Close vision	1X
Long range vision	7X
Field of view:	
Close vision (1X):	
Horizontal	60°
Vertical	10°, 20 min
Long range vision (7X)	10°
Length	$11\frac{9}{32}$ in.
Width	$7\frac{9}{16}$ in.
Height	$11\frac{31}{32}$ in.
Weight	16 lb, 12 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7204.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscopes per shipping container

Length	2 ft, $7\frac{3}{4}$ in.
Width	2 ft, $4\frac{1}{2}$ in.
Height	1 ft, $4\frac{1}{8}$ in.
Volume	8.35 cu ft
Gross weight	176.5 lb
Ship tons	0.21

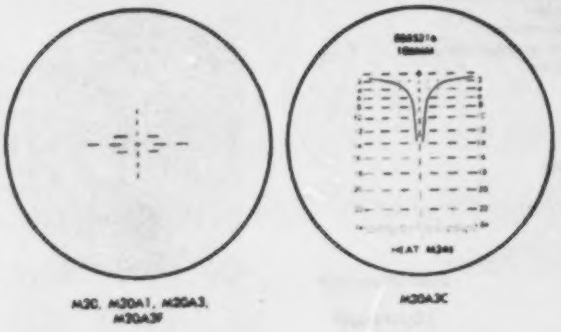
Outside Continental United States

Shipped 6 periscopes per shipping container

Length	2 ft, $7\frac{3}{4}$ in.
Width	2 ft, $4\frac{1}{2}$ in.
Height	1 ft, $4\frac{1}{8}$ in.
Volume	8.35 cu ft
Gross weight	176.5 lb
Ship tons	0.21

References: SNL F-235, Vol. 6; TM 9-1608F.

PERISCOPE: M20 (T35), M20A1, M20A3, M20A3C, AND M20A3F



RETICLE PATTERNS

ORD A1770

Secondary item

Model	*Line item No.*	*Federal stock No.*
M20 (T35)		1240-765-2791
M20A1		1240-344-4645
M20A3		1240-546-9580
M20A3C		1240-692-1325
M20A3F		1240-707-1265

General

PERISCOPE: M20 (T35), M20A1, M20A3, M20A3C, or M20A3F is a monocular-type optical instrument that has an offset line-of-sight to enable an operator to view the surrounding terrain without exposing himself. It has two built-in optical systems, a 1-power system for wide-angle close observation of terrain and a 6-power system for sighting distant objects and ranging on targets. It is composed of two separate major components, secured to the periscope mount, the head assembly and the body assembly. The head assembly contains a first-surface mirror used by both optical systems. The body assembly contains the 75° prism of the 1-power optical system and the penta prism, lenses, diaphragm, and reticle of the 6-power optical system. A manually controlled spring-loaded elevation input coupling is provided on the head assembly for rotation of the internal mirror to deviate the line-of-sight. The mirror returns to its original position due to the spring-loaded action of the coupling. A diopter scale is provided on the eyepiece for focusing. The azimuth and elevation boresighting knobs are provided for making boresighting adjustments. Illumination of the reticle patterns is provided for by LIGHT, INSTRUMENT: M36. The filler assembly is a cover used to cover the gap between the head and body assemblies, to keep out dust and outside light.

Periscope M20 or M20A1 is a component of the fire control system on TANK, COMBAT, FULL TRACKED: 76-mm gun, M41 and M41A1; TRAINER, TANK GUNNERY: 76-mm gun, M17 and M17A1; TANK, COMBAT, FULL TRACKED: 90-mm gun, M47; TRAINER, TANK GUNNERY: 90-mm gun, M18; TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A1, and M48C; TRAINER, TANK GUNNERY: M20; and TANK, COMBAT, FULL TRACKED: 120-mm gun, M103. Periscope M20, M20A1, or M20A3 is used on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2. Periscope M20A3C is used on RIFLE, 106 MILLIMETER: multiple, self-propelled, M50. Periscope M20A3F is used on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2C.

Differences among models

Periscopes M20, M20A1, M20A3, M20A3C, and M20A3F are very much alike so far as functioning and external appearance are concerned. M20A3C differs in its reticle design. M20, M20A1, M20A3, and M20A3F have similar reticles. Minor differences exist between models in the design of head and body assemblies, some head assemblies having internal components welded instead of being pinned, and the body assemblies use different types of boresighting knobs. M20 and M20A1 differ from the rest in the location of the locking levers. M20-series periscopes are equipped with a filler assembly except on TANK, COMBAT, FULL TRACKED: 90-mm gun, M47 and on TRAINER, TANK GUNNERY: M18.

Data plate location

The identification plates (nameplates) are located on the head and body assemblies.

Classification

M20	Standard B (OTCM 37255).
M20A1	Standard B (OTCM 37255).
M20A3	Standard A
M20A3C	Standard A
M20A3F	Standard B

CHARACTERISTICS

Magnification:	
Close vision	1X
Long range vision	6X
Field of view:	
Close vision (1X):	
Horizontal	33°, 18 min
Vertical	7°, 9 min
Long range vision (6X)	8°
Line-of-sight rotation:	
Depression	18°
Elevation	22°

Reticle:	
Pattern width:	
M20, M20A1, M20A3	40 mils
M20A3C	60 mils
Total movement	14 mils
Deflection graduations	5 mils
Head assembly:	
Length	11⅛ in.
Width	4⅛ in.
Height	9⅝ in.
Weight	7½ lb
Body assembly:	
Length	9⅛ in.
Width	5⅝ in.
Height	6⅝ in.
Weight	4½ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

- M20 and M20A1—See ORD 7 SNL G-262.
- M20A3—See TM 9-7022 and TM 9-2350-206-12.
- M20A3C—See TM 9-2350-212-12.
- M20A3F—

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

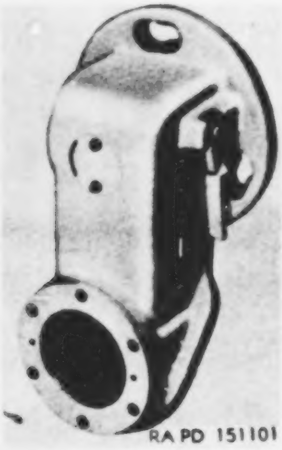
Shipped 8 periscopes per shipping container	
Length	3 ft, ¾ in.
Width	2 ft, 7 in.
Height	2 ft, 1 in.
Volume	16.5 cu ft
Gross weight	198.5 lb
Ship tons	0.41

Outside Continental United States

Shipped 8 periscopes per shipping container	
Length	3 ft, ¾ in.
Width	2 ft, 7 in.
Height	2 ft, 1 in.
Volume	16.5 cu ft
Gross weight	198.5 lb
Ship tons	0.41

References: SNL F-235, Vol. 15, TM 9-1240-227-34, TM 9-1240-227-50.

PERISCOPE, TANK: M23 (T38)



RA PD 151101

Secondary item

Model	*Line item No.*	*Federal stock No.*
M23		1240-344-4644

General

PERISCOPE, TANK: M23 (T38) is a simply constructed, sealed, optical instrument having a magnification of 1-power and a field of view of 10°. The periscope consists of a one-piece housing, an optical system with two windows, a 90° prism, and a mirror. The line-of-sight through the instrument is depressed 2°, 15 min ±2 min in elevation with respect to a line-of-sight normal to the upper window. A lock is provided to secure the periscope to MOUNT, TELESCOPE: M100 (T169E1). PERISCOPE: M23 is used with TELESCOPE: M101 (T150E1) and forms part of the fire control equipment for HOWITZER, LIGHT, SELF-PROPELLED: full tracked, 105-mm, M52 (T98E1) or M52A1 in direct fire.

Differences among models

Data plate location

The identification plate (nameplate) is located on the lock side of the periscope housing.

Classification: Standard A.

CHARACTERISTICS

Length (max)	8.5 in.
Width (max)	4.75 in.
Height (max)	4.50 in.
Weight	3.50 lb
Magnification	1-power
Field of view	10°

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7204.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 24 periscopes per shipping container

Length	3 ft, 2 in.
Width	2 ft, 3 in.
Height	2 ft, 2 in.
Volume	12.5 cu ft
Gross weight	200 lb
Ship tons	0.31

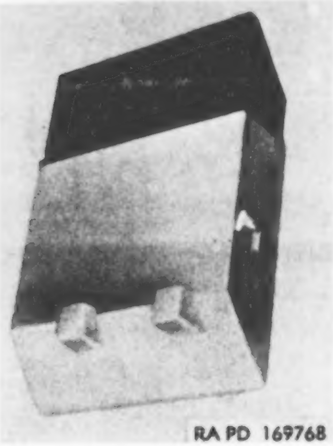
Outside Continental United States

Shipped 24 periscopes per shipping container

Length	3 ft, 2 in.
Width	2 ft, 3 in.
Height	2 ft, 2 in.
Volume	12.5 cu ft
Gross weight	200 lb
Ship tons	0.31

References: TM 9-7204.

PERISCOPE, TANK: M26 (T25)



RA PD 169768

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M26	....	1240-768-8875

General

PERISCOPE, TANK: M26 (T25), mounted in the periscope mounts around the driver's hatch opening of TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 (serial numbers 5 through 59), and TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A$_1$, and M48C (serial numbers 1 through 3741), is used for observation of terrain.

The periscope is of solid plastic with single power of magnification.

Differences among models

Data plate location

Data plate located on body assembly.

Classification: Standard A.

CHARACTERISTICS

Height	1 ft, 1/32 in.
Width	10 in.
Depth	8½ in.
Weight	16.55 lb
Magnification	1 power
Field of view	90° horizontal, 26° vertical

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 8 periscopes per shipping container

Length	2 ft, 7 in.
Width	1 ft, 7⅛ in.
Height	1 ft
Volume	4.21 cu ft
Gross weight	170.08 lb
Ship tons	0.11

Outside Continental United States

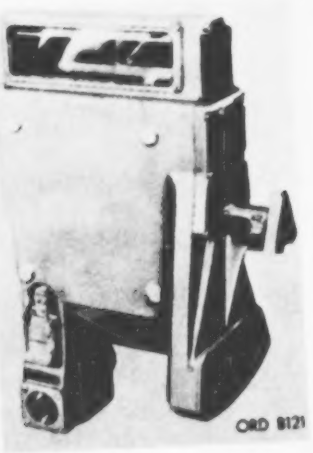
Shipped 8 periscopes per shipping container

Length	2 ft, 7 in.
Width	1 ft, 7⅛ in.
Height	1 ft
Volume	4.21 cu ft
Gross weight	170.08 lb
Ship tons	0.11

References: SNL F-235, Vol. 18.

30 August 1963

PERISCOPE, TANK: M29 (T50E1)



ORD 8121

Secondary item

Model	*Line item No.*	*Federal stock No.*
M29		1240-629-1241

General

PERISCOPE, TANK: M29 (T50E1), is used as part of the primary fire control system for TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1 (T43E2). It is a monocular-type instrument containing two optical systems: a unity power system for wide, close-in vision of the terrain, and an eight-power system for sighting of distant targets.

This periscope differs from the normal in that the gun laying reticles with separate boresighting mechanism are optically projected into separate and independently collimated optical systems by CORRECTOR, CANT: M3 for the eight-power system and SIGHT, INFINITY: M44.

Differences among models

Data plate location

The identification plate is located on the rear of the periscope.

Classification: Standard A.

CHARACTERISTICS

Height	17 21/32 in.
Width	11⅝ in.
Depth (max)	7 5/32 in.
Weight	18¾ lb
Magnification	8 power and 1 power
Field of view:	
Eight-power system	8°
Unity-power system:	
Horizontal	30.7°
Vertical	4.35°

Maximum adjustable line-of-sight from horizontal:	
Elevation	22°
Depression	18°

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

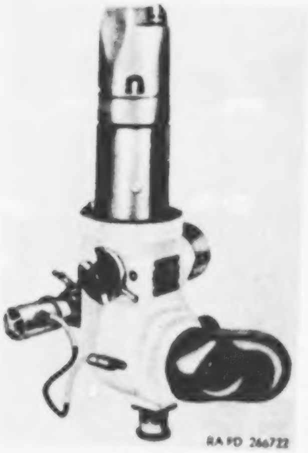
Shipped 4 periscopes per shipping container	
Length	2 ft, 11½ in.
Width	2 ft, ⅝ in.
Height	2 ft, ½ in.
Volume	12.4 cu ft
Gross weight	178 lb
Ship tons	0.31

Outside Continental United States

Shipped 4 periscopes per shipping container	
Length	2 ft, 11½ in.
Width	2 ft, ⅝ in.
Height	2 ft, ½ in.
Volume	12.4 cu ft
Gross weight	178 lb
Ship tons	0.31

References: TM 9-1240-246-35, TM 9-1240-246-35P.

PERISCOPE: XM30



RA PD 266722

Model	*Line item No.*	*Federal stock No.*
XM30		1240-767-6399

General

PERISCOPE: XM30, serves as part of the fire control system for TANK, COMBAT, FULL TRACKED: flamethrower, M67A1 and is used as a means of sighting the flame gun and the caliber .30 machinegun.

It is oriented and linked to the flame gun trunnion through MOUNT, PERISCOPE: XM113 so that the line-of-sight of the periscope moves with the gun whenever it is elevated or depressed. When installed, the periscope projects through the roof of the tank cupola. The basic function of the periscope is to raise the observer's line of vision, placing his eye, in effect, outside of the tank at a vantage point for the flame gun and the caliber .30 machinegun. The cap assembly of the periscope, which protrudes above the turret, is protected by the guard of the periscope mount. Periscope XM30 consists of the cap assembly with an air valve assembly, the body housing containing the main cell assembly, and the elbow housing, with the eyepiece cell assembly, eyeshield assembly, and reticle assembly.

Differences among models

Data plate location

The identification plate (nameplate) and a caution plate are located on the elbow housing.

Classification: Standardization pending.

CHARACTERISTICS

Height	1 ft, 6¼ in.
Length (front to back)	10½ in.
Width	6⅝ in.
Weight	11½ lb
Magnification	1.5 power
Field of view	48°
Diameter of exit pupil	0.17
Effective focal length of objective	1.440
Effective focal length of eyepiece	1.259
Elevation of line-of-sight (max)	60°
Depression of line-of-sight (max)	15°
Boresight adjustment (azimuth and elevation)	±30 mils

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

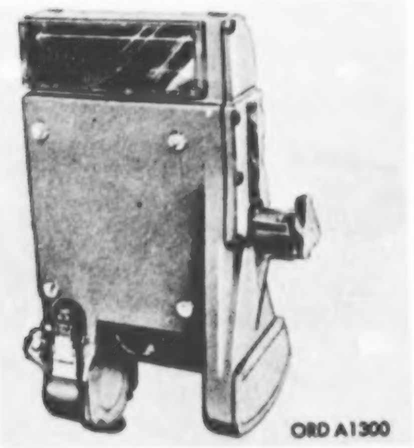
Shipped periscopes per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped periscopes per
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-1240-255-34, TM 9-1240-255-35P, TM 9-1240-255-50.

PERISCOPE, TANK: M31 (T50)



ORD A1300

Secondary item

Model	*Line item No.*	*Federal stock No.*
M31		1240-676-2174

General

PERISCOPE, TANK: M31 (T50) is used in conjunction with SIGHT, INFINITY: M44C and MOUNT, PERISCOPE: M115 (T197) as part of the primary fire control system for TANK, COMBAT, FULL TRACKED: 105-mm gun, M60.

It is a monocular-type instrument containing two optical systems: a unity-power system (one-power magnification) for wide vision of the terrain and an eight-power system for sighting on distant targets.

Differences among models

Data plate location

The identification plate (nameplate) is located on the rear of the periscope.

Classification: Standard B (AMCTC 312).

CHARACTERISTICS

Height	17 15/32 in.
Width	12¼ in.
Weight	18½ lb
Magnification:	
Viewer	1 power
Eyepiece	8 power
Field-of-view:	
Viewer:	
Vertical	5°, 48 min
Horizontal	30°, 32 min
Eyepiece	8°
Total reticle movement (horizontal, vertical)	14 mil
Maximum adjustable line-of-sight from horizontal:	
Elevation	22°
Depression	18°

Boresight knob scales (gun laying reticle)—graduated in 0.1 mil increments.

Diopter scale— −3 to +3 diopters graduated in 0.5 diopter increments.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 periscopes per shipping container

Length	2 ft, 11⅛ in.
Width	2 ft, ⅝ in.
Height	2 ft, ½ in.
Volume	12.4 cu ft
Gross weight	178 lb
Ship tons	0.31

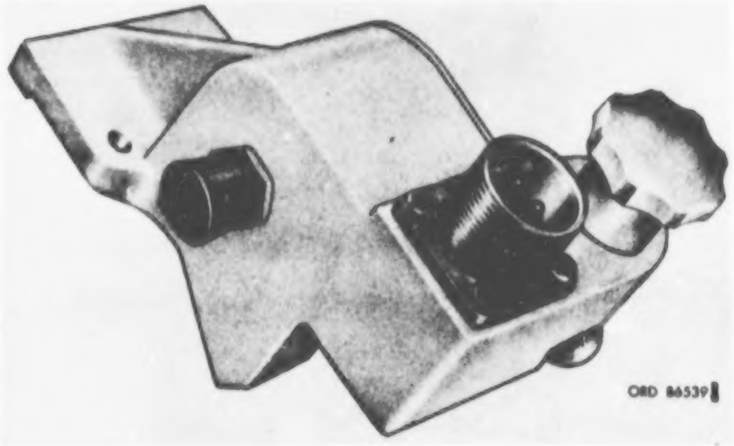
Outside Continental United States

Shipped 4 periscopes per shipping container

Length	2 ft, 11⅛ in.
Width	2 ft, ⅝ in.
Height	2 ft, ½ in.
Volume	12.4 cu ft
Gross weight	178 lb
Ship tons	0.31

References: TM 9-1240-260-35, TM 9-1240-260-35P.

POWER UNIT: ASSEMBLY (ORD No. 8289242)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
8289242		1240-675-1169

General

POWER UNIT: assembly (8289242) is attached to PERISCOPE: M31 in TANK, COMBAT, FULL TRACKED: 105-mm gun, M60.

The power unit assembly consists primarily of a housing, a rheostat, a receptacle assembly, and a contact assembly.

Differences among models

Data plate location

The identification plate (nameplate) is located on the lower portion of the power unit assembly.

Classification

CHARACTERISTICS

Length	(approx) 5 5/16 in.
Width, overall	(approx) 5 1/4 in.
Depth	(approx) 3 5/8 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 power unit assemblies per shipping container

Length	1 ft, 7 1/8 in.
Width	11 in.
Height	9 5/8 in.
Volume	1.2 cu ft
Gross weight	47 lb
Ship tons	0.03

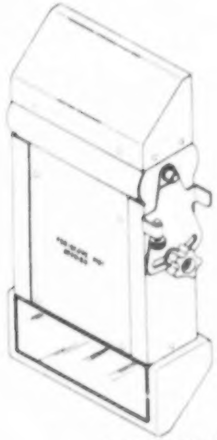
Outside Continental United States

Shipped 12 power unit assemblies per shipping container

Length	1 ft, 7 1/8 in.
Width	11 in.
Height	9 5/8 in.
Volume	1.2 cu ft
Gross weight	47 lb
Ship tons	0.03

References: TM 9-1240-260-35.

PERISCOPE, TANK: M37



ORD B6803A

Model	*Line item No.*	*Federal stock No.*
M37		6650-856-9455

General

PERISCOPE, TANK: M37 is of the solid plastic type, having a single power of magnification. It is used with TANK COMBAT, FULL TRACKED: 105-mm gun, M60A1.*

Differences among models

Data plate location

The identification is stamped on the body of the periscope.

Classification:

CHARACTERISTICS

Magnification	1 power
Field of view:	
Horizontally	72 deg.
Vertically	26 deg.
Length (including crash pad)	1 ft. 3½ in.
Width (including crash pad)	8¾ in.
Depth (including crash pad)	3⅛ in.
Weight	16 lb

PERFORMANCE

* For characteristics and data, see item in section 28.

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped periscopes per shipping container.

Length	31 in.
Width	26 in.
Height	20⅝ in.
Volume	9.679 cu ft
Gross weight	199.5 lb
Ship tons	0.24

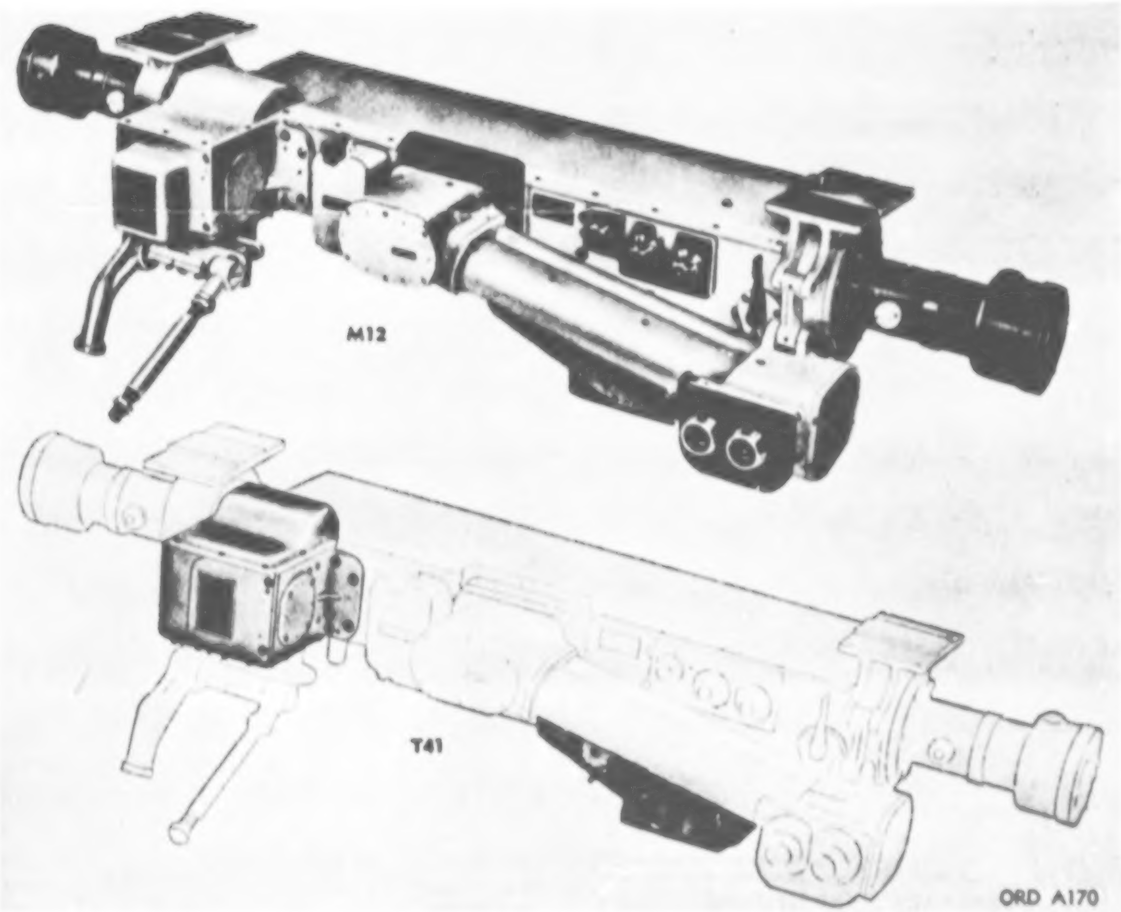
Outside Continental United States

Shipped periscopes per shipping container.

Length	31 in.
Width	26 in.
Height	20⅝ in.
Volume	9.679 cu ft
Gross weight	199.5 lb
Ship tons	0.24

References: TM 9-1240-315-35, TM 9-1240-315-35P.

RANGE FINDER, FIRE CONTROL: M12 (T41E3) AND T41



ORD A170

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M12 (T41E3)		1240-344-4655

General

RANGE FINDER, FIRE CONTROL: M12 (T41E3) or T41, is essentially a stereoscopic, ballistic-computing range finder operated by the gunner who, through the use of various adjustment knobs, indexes the proper ammunition, sets the ballistic correction, ranges and tracks the target, and boresights the gun for firing. The range finder consists of two end housing assemblies, a telescope assembly, a compensator assembly, a collimator assembly, a ballistic cam housing assembly, and the main housing which contains gearing, wiring, and other associated parts. The range finder is supported by two main bearing assemblies attached to the tank turret roof. The range finder is connected, through connectors and rods, to the ballistic drive and the gun trunnion. TRANSMITTER, SUPERELEVATION: M22 (T18), is connected by a cable to a receptacle at the rear of the range finder M12.

Differences among models

The difference between the range finder M12 and the T41 is in the geared relationship of the superelevation synchro to the rest of the gear train in the range finder. The exterior appearance of the cam housing for rang finder M12 is changed by the substitution of a bulged ballistic cam housing cover which is necessary to provide space for the addition of the superelevation mechanism assembly. Also, the ammo data chart for the T41 differs from the M12 chart.

Data plate location

Classification: M12 ....Standard C (OTCM 37107)

CHARACTERISTICS

Weight	270 lb
Length (overall)	5 ft, 4⅝ in.
Depth (overall)	2 ft, 1⅝ in.
Height (overall)	2 ft, 4 in.
Range	500 to 5,000 yd
Magnification	7½ power
Base length	5 ft
Exit pupil	0.197 in. (5-mm)
Field of view	5°
Diopter adjustment	−3 to +3 diopters
Interpupillary adjustment	58-mm to 72-mm

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310–5.

STORAGE AND SHIPMENT DATA

Within Continental United States

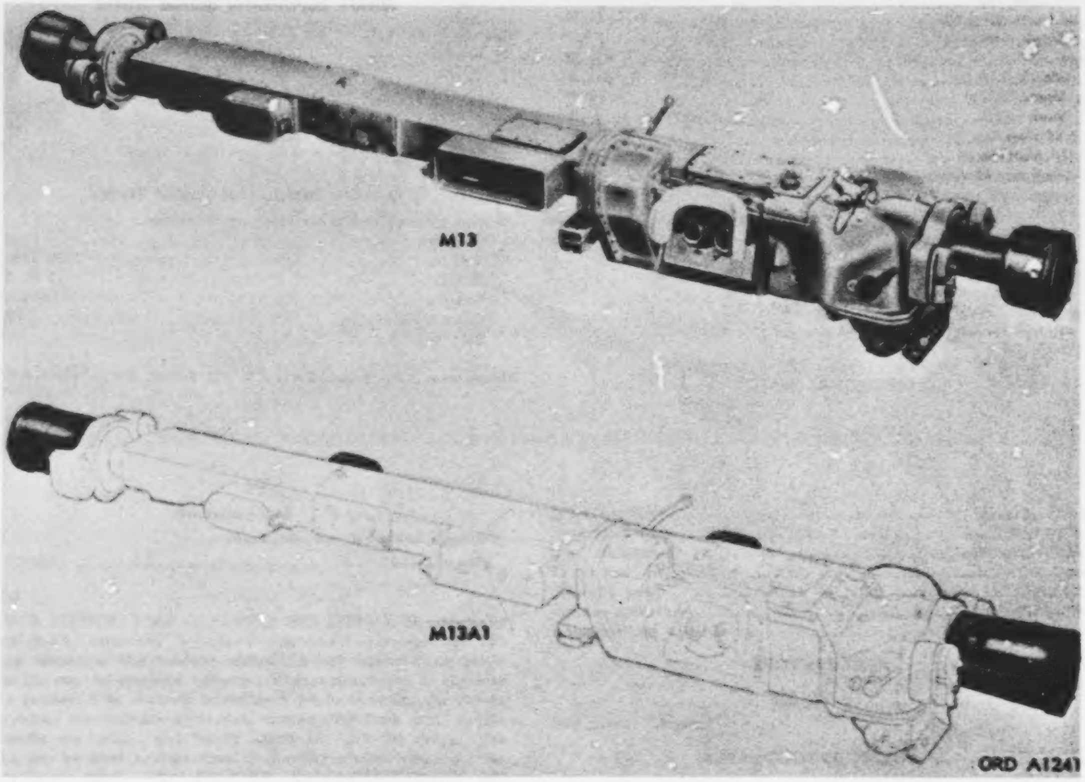
Shipped range finders per box
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped range finders per box
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F–356, Section 1, TM 9–6067.

RANGE FINDER, FIRE CONTROL: M13 (T46E1) AND M13A1 (T46E4)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M13	....	1240-344-4654
M13A1	....	1240-608-2062

General

RANGE FINDER, FIRE CONTROL: M13 (T46E1) and M13A1 (T46E4), is a stereoscopic-type instrument used as the principal ranging device in the primary sighting system for the 90-mm gun tanks M48, M48A1, M48C, M48A2, and M48A2C, and is used for direct fire operation. These range finders provide automatic and continuous ranging information through an output shaft to the ballistic computer. For sighting systems that do not include a ballistic computer, the range information may be read from the range scale. Accuracy of the range finder is inherently high because of its long base length and 10-power magnification. The range finder may also be used, if the gunner's periscope is out of order, for boresighting the gun. Either the left or right end of the range finder may be used for boresighting.

The fire control range finder M13 (T46E1) is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A1, and M48C. The fire control range finder M13A1 (T46E4) is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2.

Differences among models

The difference between the range finders M13 and M13A1 is in the design of end housings and stereo reticle and lamp housings.

Data plate location

The data are stamped on the instrument panel.

Classification:

M13	Standard A.
M13A1	Standard A (OTCM 35973).

CHARACTERISTICS

M13:

Weight	134.38 lb
Length (overall)	85 in.
Depth (overall)	14 in.
Height (overall)	12 in.
Range	500 to 4,800 yd
Magnification	10 power
Base length	79 in.
Exit pupil	2.80-mm
Field of view	4°
Interpupillary adjustment	58 to 72-mm
Focus adjustment	4.00 diopters

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M13A1:

Weight	153 lb
Length (overall)	5 ft, 11 in.
Depth (overall)	1 ft
Height (overall)	1 ft, 2½ in.
Range	500 to 4,800 yd
Magnification	10 power
Base length	79 in.
Exit pupil	2.80-mm
Field of view	4 deg
Diopter adjustment	0
Interpupillary adjustment	58 to 72-mm
Focus adjustment	4.00 diopters

PERFORMANCE

EQUIPMENT

Basic Issue Items:
M13—See ORD 7 SNL G-254
M13A1—

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 range finder per shipping container

Length	7 ft, 6 in.
Width	1 ft, 11½ in.
Height	2 ft, 6 in.
Volume	36.801 cu ft
Gross weight	652 lb
Ship tons	0.92

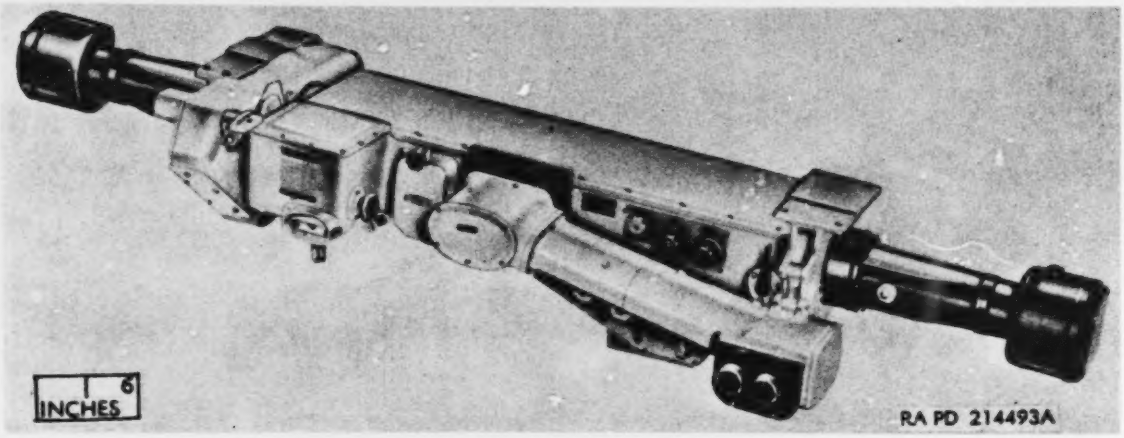
Outside Continental United States

Shipped 1 range finder per shipping container

Length	7 ft, 6 in.
Width	1 ft, 11½ in.
Height	2 ft, 6 in.
Volume	36.801 cu ft
Gross weight	652 lb
Ship tons	0.92

References: SNL F-356, Section 3, TM 9-6023, TM 9-1240-218-35P.

RANGE FINDER, FIRE CONTROL: M14 (T42E1)



RA PD 214493A

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M14 (T42E1)		1240-822-4500

General

RANGE FINDER, FIRE CONTROL: M14 (T42E1), is essentially a stereoscopic, internally collimated instrument incorporating two sighting telescopes and ballistic computing and transmitting mechanisms for use in armored vehicles. The range finder is operated by the gunner, who controls adjustment knobs to index the proper ammunition, sets ballistic correction, corrects for tank cant, ranges and tracks the target, and finally sights the gun for firing. The weapon can be fired against fixed or moving ground subjects from the stationary tank. TRANSMITTER, SUPERELEVATION: M22 (T13)* is connected by a cable to a receptacle at the rear of the range finder M14.

Differences among models

Data plate location

The identification plate is located on the housing of the range finder.

Classification: Standard A.

CHARACTERISTICS

Weight	400 lb
Length (overall)	6 ft, 8¼ in.
Depth (overall)	1 ft, 11 in.
Depth (overall, including elevating shaft assy)	6 ft, 5 in.
Height (overall)	1 ft, 2½ in.
Height (overall, including elevating shaft assy)	1 ft, 3½ in.
Range	500 to 5,000 yd
Magnification	7½ power
Base length	6 ft, 1 in.
Cant adjustment	15.47° (0 to 275 mils)
Exit pupil	5-mm
Field of view	6°
Diopter adjustment	−3 to +3 diopters
Interpupillary adjustment	58-mm to 72-mm

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped range finders per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped range finders per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-356, Section 2; TM 9-6045.

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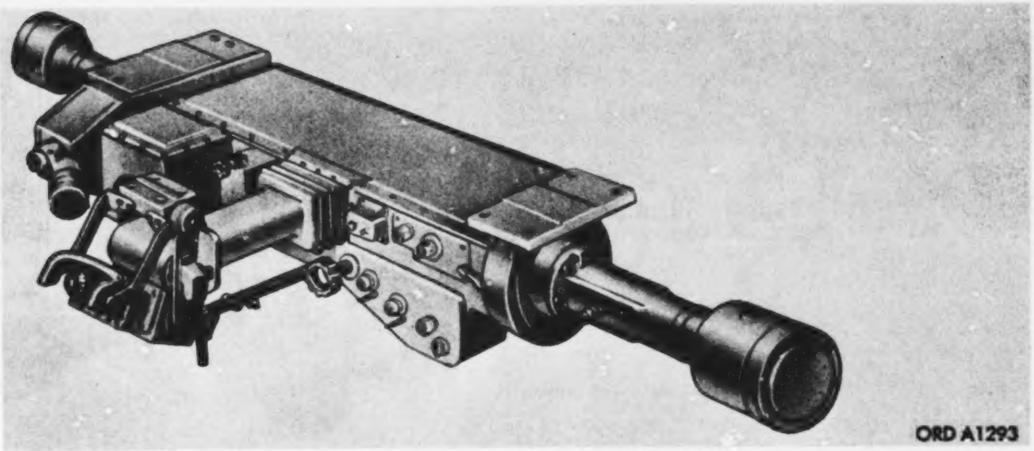
* For data and characteristics, see item in section 16.

RANGE FINDER, FIRE CONTROL: M15 (T52)


ORD A1293

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M15		1240-625-3661

General

RANGE FINDER, FIRE CONTROL: M15 (T52) functions as the primary sighting and fire-control equipment for the 120-mm gun in TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1 (T43E2). It is a stereoscopic, internally collimated instrument incorporating two sighting telescopes. In addition to its function under normal operations, the range finder can also be used as an offset direct sighting telescope by which the 120-mm gun cannon can be laid in the event that either side (or end housing assembly) is damaged.

Differences among models

Data plate location

Classification: Standard A (OTCM 36540).

CHARACTERISTICS

Length (overall)	80.2 in.
Depth (overall)	23 in.
Height (overall)	14.5 in.
Range	500 to 5,000 yd
Magnification	8.6 power
Base length	73 in.
Cant adjustment	0 to 275 mils or 15.47°
Exit pupil	4.35-mm
Field of view	4.3°
Diopter adjustment	−3 to +3 diopters
Interpupillary adjustment	58-mm to 72-mm
Weight	450 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

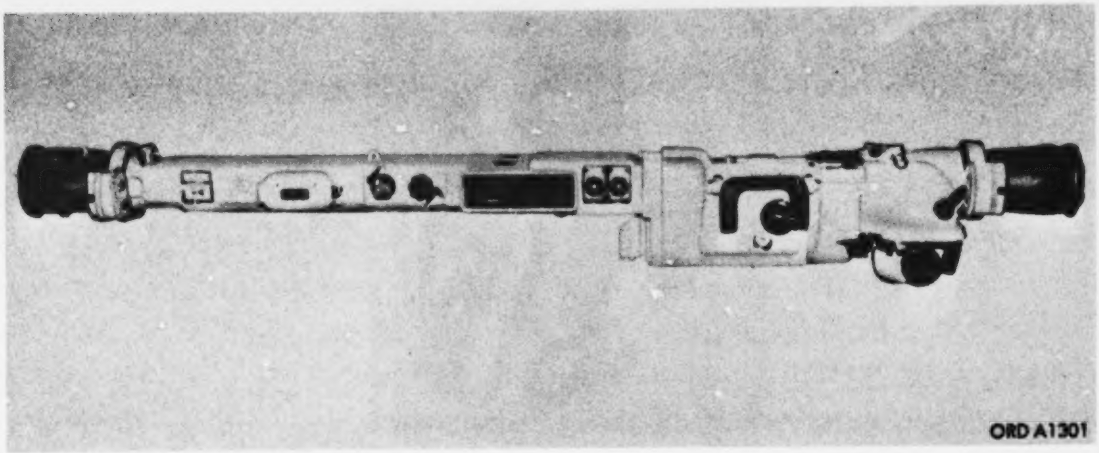
Shipped range finders per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped range finders per
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-1240-245-35, TM 9-1240-245-35P.

RANGE FINDER, FIRE CONTROL: M17C



ORD A1301

Secondary item

Model	*Line item No.*	*Federal stock No.*
M17C, w/e	....	1240-676-2178

General

RANGE FINDER, FIRE CONTROL: M17C, is a hermetically sealed, full field coincidence image instrument used as the ranging device of the primary sighting and fire control for TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. It is mounted to the turret wall. This instrument provides ranging information to COMPUTER, BALLISTICS: M13A1D by means of the range output shaft which mechanically connects the range finder to the computer. It may also be used as an offset telescope under emergency conditions.

Differences among models

Data plate location

Data plate is located on central panel of range finder.

Classification: Standard A (OTCM 37002).

CHARACTERISTICS

Weight (including end housing assemblies)	149 lb
Length (including end housing assemblies)	7 ft
Base length	6 ft, 7 in.
Width	1 ft, 2 in.
Height (housing height)	1 ft
Magnification	10 power
Field of view	4° (actual)
Diameter of exit pupil	0.120 in.
Diopter adjustments	−4 to +4
Operating voltage	24 v
Range	500 to 4,400 meters

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 range finder per shipping container

Length	7 ft, 6 in.
Width	1 ft, 11½ in.
Height	2 ft, 6 in.
Volume	36.801 cu ft
Gross weight	652 lb
Ship tons	0.92

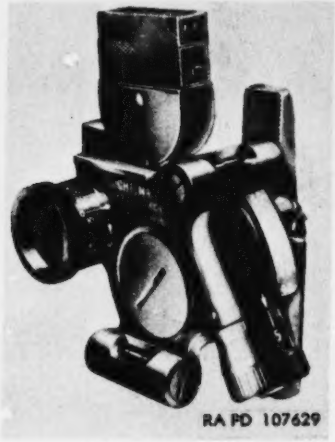
Outside Continental United States

Shipped 1 range finder per shipping container

Length	7 ft, 6 in.
Width	1 ft, 11½ in.
Height	2 ft, 6 in.
Volume	36.801 cu ft
Gross weight	652 lb
Ship tons	0.92

References: TM 9-1240-258-34, TM 9-1240-258-35P, TM 9-1240-258-50.

SIGHT: M4


RA PD 107629

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M4	....	1240-757-9927

General

SIGHT, M4, is a small compact instrument provided with a collimator instead of a telescope. They are easily attached to or detached from mortars with which they are used in high-angle fire. The cross level, used in conjunction with the cross leveling mechanism, indicates when the mortar is cross leveled. Elevation angles are set on an elevation scale and micrometer. The longitudinal level centers when the mortar elevating mechanism has elevated the mortar to the elevation indicated on the elevation scale and micrometer. Deflections are set on a deflection micrometer. An open sight is used to pick up the target, and the collimator is used for final accurate aiming. The collimator assembly may be depressed or elevated to bring the target into the field of view. The M4 sight is used with MORTAR, INFANTRY: 60-mm, M2 and M19.

Differences among models

Data plate location

The identification is located directly above the cross level.

Classification: M4—Limited Standard (OTCM 37119).

CHARACTERISTICS

Length (max)	4⅞ in.
Width (max)	3⅝ in.
Height (max)	2⅞ in.
Weight	1.16 lb

Limits of operation:

Elevation	40 to 90°
Deflection	0 to 150 mils right and left

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-48.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 sights per shipping container

Length	2 ft, 1 in.
Width	1 ft, 10⅛ in.
Height	1 ft, 4 in.
Volume	5.3 cu ft
Gross weight	130 lb
Ship tons	0.13

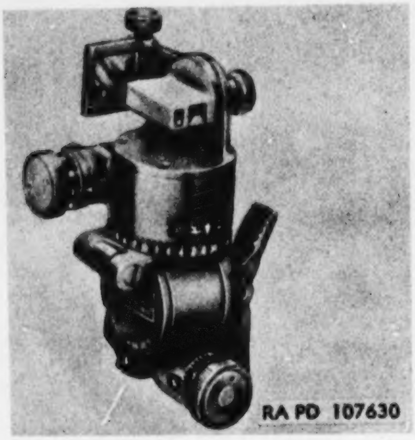
Outside Continental United States

Shipped 100 sights per shipping container

Length	2 ft, 1 in.
Width	1 ft, 10⅛ in.
Height	1 ft, 4 in.
Volume	5.3 cu ft
Gross weight	130 lb
Ship tons	0.13

References: SNL F-148, TM 9-575, TM 9-1535.

SIGHT: M6



RA PD 107630

Model	*Major item No.* *Line item No.*	*Federal stock No.*
M6		1240-757-8420

General

SIGHT, M6 has an adjustment mirror for reciprocal laying, and a deflection scale to permit greater traverse than sight M4. The deflection scale can be disengaged by pushing outward on the micrometer knob. The cross level is on the mortar mount yoke and is not part of the sight. In all other respects, the sight is similar to the sight M4 and is used in the same manner.

Differences among models

Data plate location

The identification is located directly below the cross level.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Length (max)	7 in.
Width (max)	4½ in.
Height (max)	4½ in.
Weight	6½ lb
Limits of operation:	
Elevation	40 to 90°
Deflection	0 to 3200 mils right and left

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped sights per

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped sights per

Length

Width

Height

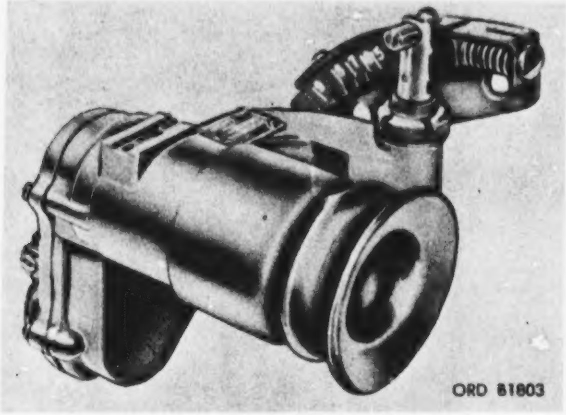
Volume

Gross weight

Ship tons

References: SNL F-148, TM 9-575, TM 9-1535.

SIGHT: M39 (T156)



Secondary item

Model	*Line item No.*	*Federal stock No.*
M39		1240-346-8684

General

Sight: M39 (T156), is used with LAUNCHER, ROCKET: 3.5-inch, M20, M20A1, M20B1, and M20A1B1.

The sight consists of an elevation plate (range scale) with auxiliary scale, elevation release pin (range indicator), reticle, eyeshield, and a lens cover. It has a stadia-type reticle.

Differences among models

Data plate location

The identification plate (nameplate) is located on the body of the sight.

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL B-42.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped per

Length

Width

Height

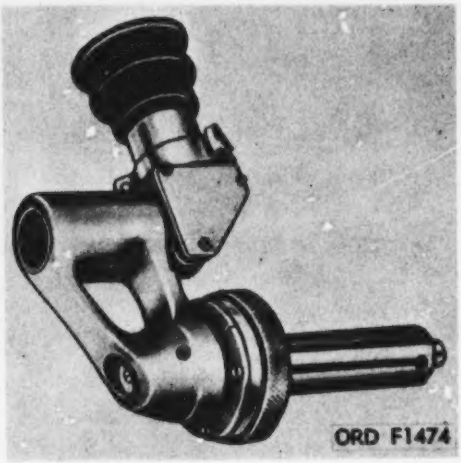
Volume

Gross weight

Ship tons

References: TM 9-1240-296-35P.

SIGHT, BORE, MUZZLE: XM50


ORD F1474

Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM50	....	1240-714-2135

General

SIGHT, BORE, MUZZLE: XM50, is used to boresight RIFLE, SPOTTING, 20 MILLIMETER: XM69 on the weapon of battle group lightweight weapon system XM28.

The muzzle boresight is a 3-power, fixed focus telescopic instrument that provides the optical line-of-sight by which the spotting rifle is aimed during the boresighting procedure. A reticle is incorporated in the telescope. The reticle pattern consists of a horizontal and vertical line (crosshair). Both lines are graduated in 2-mil increments.

Differences among models

Data plate location

Data plate is located on the mandrel bracket of the sight.

Classification: Standardization pending.

CHARACTERISTICS

Magnification	3 power

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1000-209-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 30 muzzle bore sights per shipping container

Length	1 ft, 4⅝ in.
Width	1 ft, 3⅝ in.
Height	1 ft, 1 in.
Volume	1.99 cu ft
Gross weight	58.5 lb
Ship tons	0.05

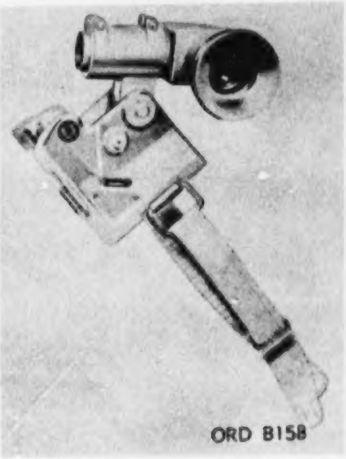
Outside Continental United States

Shipped 30 muzzle bore sights per shipping container

Length	1 ft, 4⅝ in.
Width	1 ft, 3⅝ in.
Height	1 ft, 1 in.
Volume	1.99 cu ft
Gross weight	58.5 lb
Ship tons	0.05

References: TM 9-1240-284-35, TM 9-1240-284-35P.

SIGHT, BORE, OPTICAL: M45 (T151E1)



Secondary item

Model	*Line item No.*	*Federal stock No.*
M45, w/e	....	1240-690-8811

General

SIGHT, BORE, OPTICAL: M45 (T151E1), is essentially a fixed-focus telescope adapted for use to aline the axis of the bore of the 81-mm, 105-mm, and 107-mm (formerly 4.2 in.) mortars with a distant aiming point.

The bore sight consists fundamentally of TELESCOPE, ELBOW: M62A1C, body assembly, telescope clamp, two strap assemblies, and a clamp assembly.

The bore sight is constructed so that the telescope line-of-sight lies in the plane established by the centerlines of the V-slides. When the bore sight is properly secured to a mortar tube, the centerline of the contacting V-slide is parallel to the centerline of the mortar tube. The cross-level vial, when centered, indicates that the centerlines of both slides, the elbow telescope, and the mortar tube lie in the same vertical plane.

Differences among models

Data plate location

The identification plate (nameplate) is located on the body of the bore sight.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Magnification	3 power
Field of view	12°, 12'
Diameter of exit pupil	0.15 in.
Equivalent focal length of objective	2.362 in.
Clear eye distance	0.604 in.
Length	4⅛ in.
Width	4 in.
Height (w/o strap)	4⅝ in.
Weight	2⅛ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1240-278-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

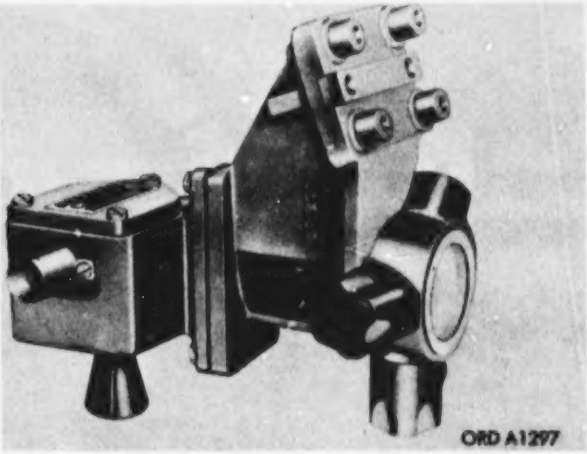
Shipped sights per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped sights per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-1240-278-12, TM 9-1240-278-20P, TM 9-1240-278-35P, TM 9-1240-278-35.

SIGHT, INFINITY: M44 (T159) AND M44C (T159E1)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Secondary item

Model	*Line item No.*	*Federal stock No.*
M44		1240-611-6492
M44C		1240-676-2181

General

SIGHT, INFINITY: M44 (T159) is an optical fire control instrument which serves as a member of the fire control system in TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1 (T43E2). SIGHT, INFINITY: M44C (T159E1) serves in a similar capacity for TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. The infinity sight is mounted on the front of DRIVE-MOUNT, PERISCOPE: M9 in the tank M103A1 or on the rear of MOUNT, PERISCOPE: M115 (T197) in the tank M60. In use, the infinity sight projectz an illuminated circular reticle image into the unity power optical system of PERISCOPE: M29. This illuminated circle is used by the gunner as a sighting reference for the coaxial machinegun within the turret. This projected reticle image is superimposed on target and may be observed when sighting on target through unity power system of the periscope.

Differences among models

Differences between models exist in the reticle, lens, and body.

Data plate location

The identification plate (nameplate) is located on the housing assembly cover.

Classification: M44—Standard A (OTCM 36540). M44C—Standard A.

CHARACTERISTICS

Length	5⅝ in.
Width	4⅞ in.
Height	3⅛ in.
Weight	1⅛ lb
Illuminated circle	20 mil dia
Lamp operating voltage	24-v dc

PERFORMANCE

EQUIPMENT

Basic Issue Items:
M44—See TM 9-2350-214-10
M44C—See TM 9-2350-215-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 infinity sights per shipping container

Length	2 ft, 4⅜ in.
Width	1 ft, 5⅛ in.
Height	1 ft, 3 in.
Volume	4.212 cu ft
Gross weight	65.6 lb
Ship tons	0.10

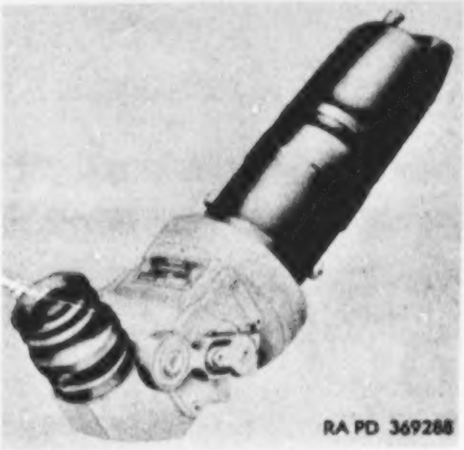
Outside Continental United States

Shipped 20 infinity sights per shipping container

Length	2 ft, 4⅜ in.
Width	1 ft, 5⅛ in.
Height	1 ft, 3 in.
Volume	4.212 cu ft
Gross weight	65.6 lb
Ship tons	0.10

References: TM 9-1240-248-35, TM 9-1240-248-35P.

SIGHT, PERISCOPE: M25 (T42)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M25	....	1240-344-4675

General

SIGHT, PERISCOPE: M25 (T42), serves as a member of the fire-control systems of TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1 for sighting MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, within the tank commander's cupola. When installed, the sight projects through the roof of the tank cupola and is located and supported by MOUNT, PERISCOPE: M104.

The eyepiece of the sight, which contains the eyelens and field lens, is fixed and remains stationary relative to the tank. The body prism rotates the line-of-sight from 15° depression to 60° elevation in maintaining the line-of-sight parallel to the line of fire of the machinegun throughout the gun's full range. Connection from the gun to the sight is made through a quick-release link assembly, movement of which is transmitted to the body prism through tape-connected pulleys.

Means for making azimuth boresighting adjustment is provided by an eccentric adjusting pin at the mounting flange of the sight. Elevation adjustment is provided at the connecting arm to which the link assembly connects.

The sight is sealed against the entrance of moisture to the optical system and is filled with dry nitrogen gas.

Differences among models

Data plate location

The identification plate (nameplate) is located on the rear of the periscope sight.

Classification: Standard B.

CHARACTERISTICS

Magnification	1.27 power
Field of view	30°
Diameter of exit pupil	0.2358 in.
Length, front to back (max) w/o link assembly	5½ in.
Width, side to side (max)	5 in.
Height	1 ft, 2¼ in.
Weight (w/o link assembly)	7 lb, 13 oz
Weight of link assembly	11 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-254.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

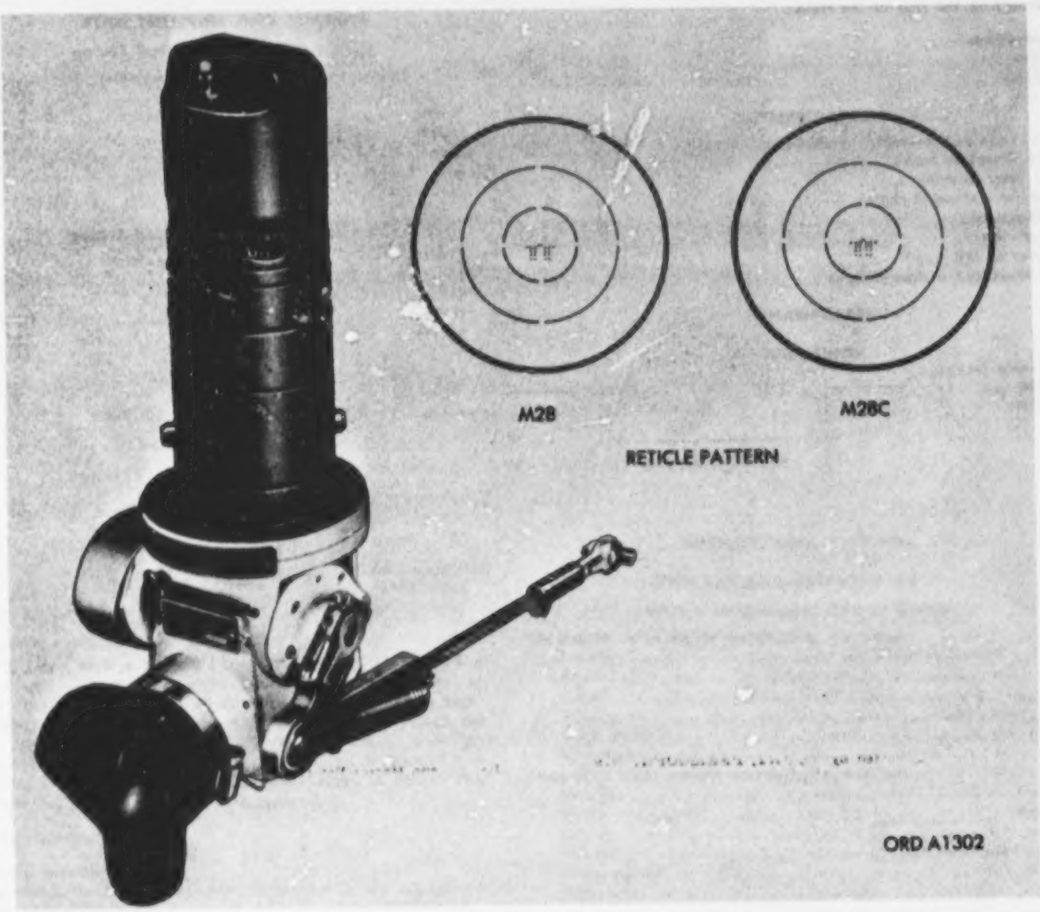
Shipped 4 sights per shipping container	
Length	1 ft, 9⅝ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 1⅛ in.
Volume	3.31 cu ft
Gross weight	59 lb
Ship tons	0.08

Outside Continental United States

Shipped 4 sights per shipping container	
Length	1 ft, 9⅝ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 1⅛ in.
Volume	3.31 cu ft
Gross weight	59 lb
Ship tons	0.08

References: *SNL F-384*, TM 9-6173.

SIGHT, PERISCOPE: M28 AND M28C



Secondary item

Model	*Line item No.*	*Federal stock No.*
M28	....	1240-346-8785
M28C	....	1240-706-0794

General

SIGHT, PERISCOPE: M28 and M28C, is monocular-type optical sighting instrument used to lay a caliber .50 machinegun on target in tanks and armored vehicles. When installed, the sight projects through the roof of the cupola and is located and supported by MOUNT, PERISCOPE: M104A1.

The eyepiece of the sight, which contains the eyelens, center lens, and field lens, is fixed and remains stationary relative to the vehicle. The prism rotates the line-of-sight from 15° to 60° elevation in maintaining the line-of-sight parallel to the line-of-fire of the machinegun throughout the gun's full range.

Means for making azimuth boresighting adjustment are provided by azimuth adjustment pin at the mounting flange of the sight. Elevation adjustment is provided at the connecting arm to which the sight link assembly connects. A rubber eyeshield serves to protect the eyelens and prevent injury to the machine gunner. An adjusting wrench is chained to the sight in order to provide the operator with a means of adjusting the azimuth adjusting pin while boresighting the installed sight.

The sight M28 is used with CARRIER, PERSONNEL, FULL-TRACKED: armored, M59; MORTAR, INFANTRY, SELF-PROPELLED: full-tracked, 4.2-inch, M84; TANK, COMBAT, FULL-TRACKED: 90-mm gun, M48A2 and M48A2C.

The sight M28C is used with TANK, COMBAT, FULL-TRACKED: 105-mm gun, M60.

Differences among models

The only difference between the M28 and M28C is the reticles. The sight M28 is calibrated in yards while the sight M28C is calibrated in meters.

Data plate location

The identification plate (nameplate) and caution decalcomania are located on the rear of the sight.

Classification:

M28	Standard A
M28C	Standard B (AMCTC 312)

CHARACTERISTICS

Weight (w/o link assembly, eyeshield and clamp)	8 lb
Length (front to back)	8 in.
Width (side to side)	5½ in.
Height (w/o attached chain)	14½ in.
Magnification	1.5 power
Field of view	48°
Diameter of exit pupil	0.17 in.
Vertical rotation of line of sight	75°

PERFORMANCE

EQUIPMENT

Basic Issue Items:

M28	See TM 9-7022
M28C	See TM 9-2350-215-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 periscope sights per shipping container

Length	1 ft, 9⅝ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 1⅛ in.
Volume	3.31 cu ft
Gross weight	59 lb
Ship tons	0.08

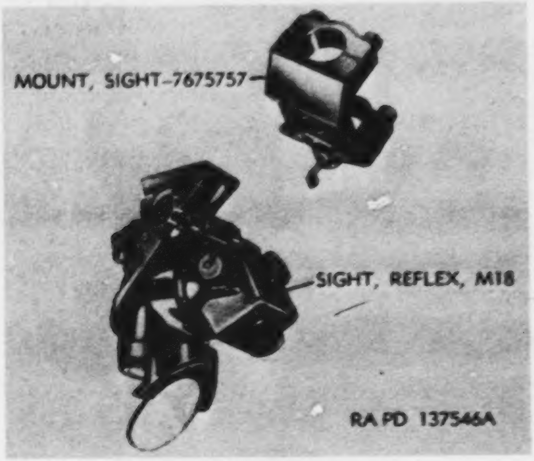
Outside Continental United States

Shipped 4 periscope sights per shipping container

Length	1 ft, 9⅝ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 1⅛ in.
Volume	3.31 cu ft
Gross weight	59 lb
Ship tons	0.08

References: TM 9-1240-239-35, TM 9-1240-239-35P.

SIGHT, REFLEX: M18; MOUNT, SIGHT, ORD No. 7675757



RA PD 137546A

Secondary Item

Model	*Line item No.*	*Federal stock No.*
SIGHT, M18		1240-759-7799
MOUNT, 7675757		1290-767-5757

General

SIGHT, reflex, M18 with sight mount ORD No. 7675757 complete a projection-type collimator sight used for direct sighting of MOUNT, MACHINEGUN: multiple caliber .50, M45C. The sight mount ORD No. 7675757 is a clamping device used to attach the SIGHT, reflex, M18 to the weapon. The mount clamps onto the horizontal sight brace of the machinegun mount. A dovetail and a gib with a locking lever secure the reflex sight in place. The reflex sight can be easily attached and removed.

Differences among models

Data plate location

The identification plate (nameplate) is located on the left side of the reflex light housing.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

SIGHT, reflex, M18:

Length	(approx) 6 in.
Height	(approx) 9 in.
Width	(approx) 6 in.
Weight	4.16 lb
Magnification	
Field of view	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-61.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

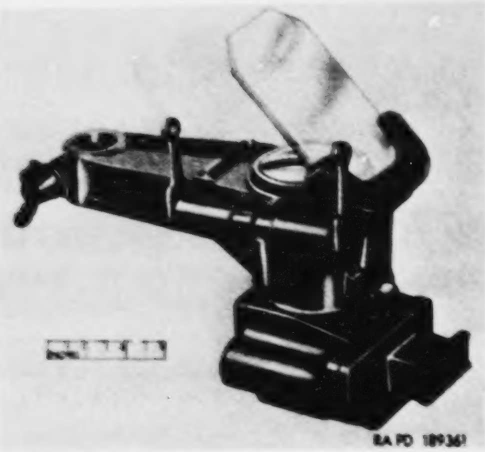
Shipped 20 reflex sights per shipping container	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Shipped 12 sight mounts per shipping container	
Length	1 ft, 1¼ in.
Width	10¾ in.
Height	8 in.
Volume	0.7 cu ft
Gross weight	56 lb
Ship tons	0.02

Outside Continental United States

Shipped 20 reflex sights per shipping container	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Shipped 12 sight mounts per shipping container	
Length	1 ft, 1¼ in.
Width	10¾ in.
Height	8 in.
Volume	0.7 cu ft
Gross weight	56 lb
Ship tons	0.02

References: SNL F-242, TM 9-1633A.

SIGHT, REFLEX: M24C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Secondary item

Model	*Line item No.*	*Federal stock No.*
M24C		1240-764-8288

General

SIGHT, reflex, M24C, is mounted by a bracket which is integral with, and extends to, the rear of main body assembly. A stud on the bottom of the bracket engages the reflex sight support cap adapter to position the sight in azimuth, and the main body clamping bolt secures the sight to the reflex sight support shaft. The main body assembly of the reflex sight is a hollow casting which incloses the optical system; consisting of an amber glass window, a reticle, a plate glass mirror, the objective, and a flat-glass reflector. The reticle may be illuminated by an electric lamp whose intensity is regulated by a rheostat. The elevation is imparted to the reflex sight by rotation of the computing sight M38 (T154).

Differences among models

Data plate location

The identification plate (nameplate) is located on the top of the reflex sight.

Classification: Standard A (OTCM 37229).

CHARACTERISTICS

Length	(approx) 9 in.
Width	(approx) 6 in.
Height	(approx) 10 in.
Weight	
Limits of operation:	
Elevation	
Deflection	
Field of sight	
Magnification	

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

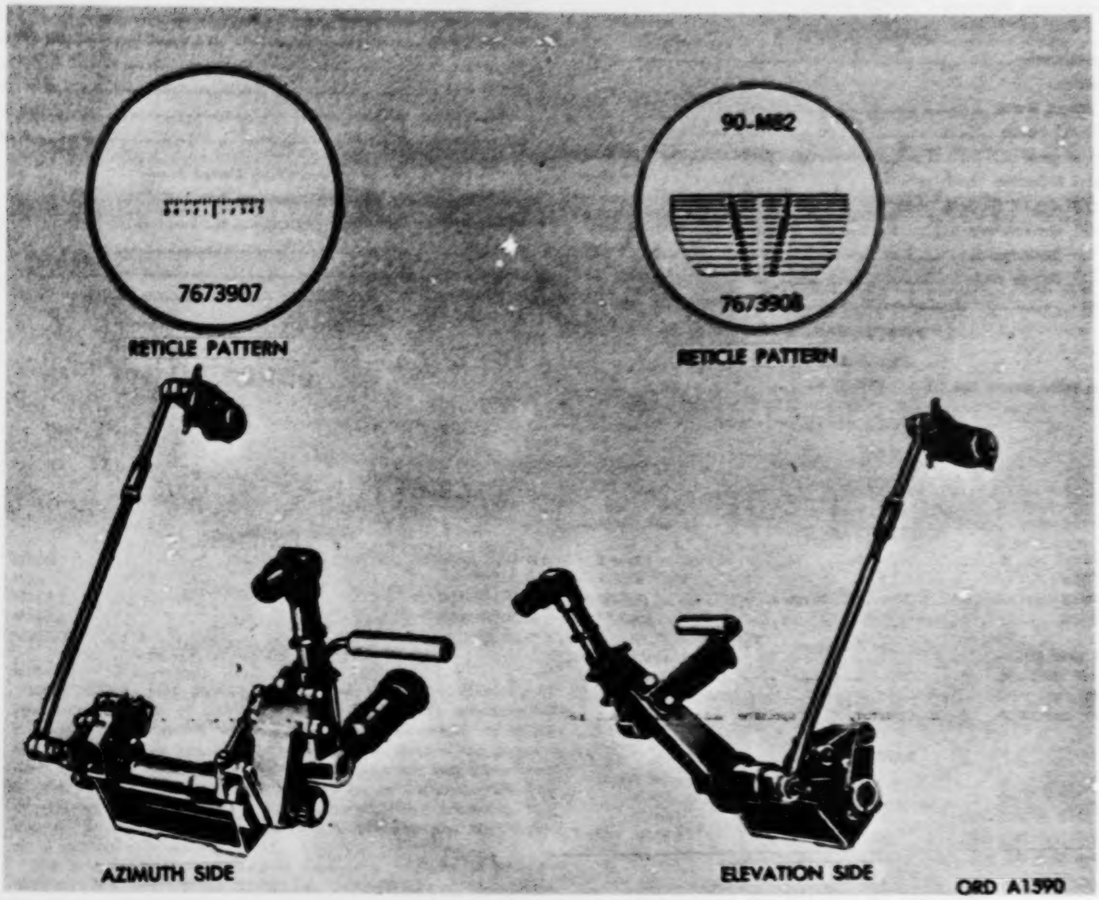
Shipped	reflex sights per wood box.
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	reflex sights per wood box.
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-363, TM 9-6061, TM 9-1220-201-35P.

SIGHTING SYSTEM, AUXILIARY: M7



	Secondary item	
Model	*Line item No.*	*Federal stock No.*
M7		1240-757-9912

General

SIGHTING SYSTEM, AUXILIARY: M7 is a fire correction system designed to permit both azimuth and elevation compensation for movement of the gun mount due to irregular terrain. It consists of an azimuth side and elevation side which are basically similar, and are manually operated, each with an attached periscopic-type telescope in which the line of sighting is about 12 inches higher than the line of viewing. It requires either two TELESCOPE: M60 as components of the azimuth and elevation sides: or TELESCOPE: M20A1C as component of the elevation side and TELESCOPE: M20A1D as component of the azimuth side. Both telescopes traverse and elevate with the gun and are controlled by linkage mechanisms of the sighting system M7, so as to follow the elevation motion of the gun up to an elevation of 267 mils (15°). The azimuth operator tracks the target with the desired deflection of the reticle pattern. The elevation operator tracks the target with the desired range line of the reticle pattern. The azimuth mechanism with telescope permits determination of horizontal movement of the gun mount and correction of fire. The elevation mechanism with telescope permits determination of elevation of the gun mount and correction of fire. The azimuth and elevation side each consists of a telescope mount assembly with attached control to position the telescope; a link mechanism assembly with a shaft which transmits movement of the mount; a connecting link assembly; and an arm with yoke assembly, which serves as an adjustable coupling between the sighting system and the gun. The mechanisms differ in that the azimuth side consists of righthand assemblies, and the elevation side consists of lefthand assemblies. Three interchangeable filter assemblies, amber, red, and neutral, are provided with each telescope. The amber and red filters are used for observing under haze and glare conditions, while the neutral filter is used for observing targets in the direction of the sun. Provision is made for illuminating the reticle for night operation by LIGHT, INSTRUMENT: M36.

The auxiliary sighting system M7, with periscopic type TELESCOPE: M60, M60A1C and M60A1D (p. 14-68) is used with MOUNT, GUN: 90-mm, antiaircraft artillery, M2 and M2A1.

Differences among models

Data plate location

The identification plates (nameplates) are located on the azimuth and elevation telescope mount bracket assemblies.

Classification: Standard C (OTCM 37107).

CHARACTERISTICS

Magnification	8X
Elevation:	
Range limits	−175 to +270 mils
Total range	445 mils
Field of view	13°, 25 min
Lateral deflection (lead) reticle:	
TELESCOPE: M80, only:	
Graduations	50-0-50 mils
Divisions	5 mil
Range scale	0-3000 yd
Filters	amber, red, neutral

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-38.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 auxiliary sighting system per box.

Length	2 ft, 11 in.
Width	1 ft, 7 in.
Height	1 ft, 1 in.
Volume	5 cu ft
Gross weight	109 lb
Ship tons	0.13

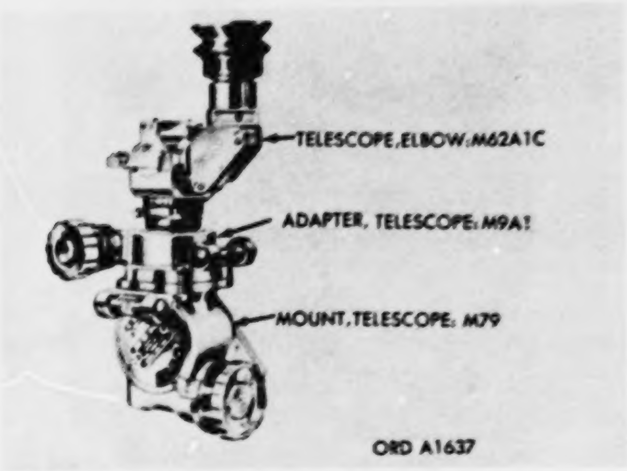
Outside Continental United States

Shipped 1 auxiliary sighting system per box.

Length	
Width	
Height	
Volume	
Gross Weight	
Ship tons	

References: SNL F-252, TM 9-6047.

SIGHTUNIT: M34, M34A1, M34A2, M24A2C



Secondary item

Model	*Line item No.*	*Federal stock No.*
M34		1240-759-7854
M34A1		1240-764-7931
M34A2		1240-300-7989
M34A2C		1240-783-8932

General

SIGHTUNIT: M34, M34A1, M34A2, and M34A2C is made up of two or more pieces of sighting equipment (generally consisting of a telescope and mount which cannot be disassembled by using troops). Sightunits are used for pointing the weapon for indirect fire. Elevation angles are set on an elevation scale and micrometer on the mount. Azimuth angles are set on an azimuth scale and micrometer or on the adapter when using an elbow telescope. The adapter is provided with an azimuth worm throwout device for rapid approximate setting.

The M34, M34A1, or M34A2 is used with RIFLE, 75 MILLIMETER: M20 and T21E12; MORTAR, INFANTRY: 4.2-inch, M30; MORTAR, INFANTRY: 81-mm, M29; and MORTAR, SELF-PROPELLED, FULL-TRACKED: 4.2-inch, M84*. The sightunit M34A2C is used with LAUNCHER, ROCKET: 318-mm, XM34* and LAUNCHER, ROCKET: 115-mm, M91 (T145).

Differences among models

Each of the sightunits is assembled from similar models of three basic units as listed below:

Sightunit	*Telescope mount*	*Telescope adapter*	*Elbow telescope*
M34	M79	M9	M62
M34A1	M79	M9	M62A1C
M34A2	M79	M9A1	M62A1C
M34A2C	M79	M9A1	M62A1D

Data plate location

Identification plates (nameplates) on all models are on the telescope mount below the longitudinal level.

Classification:

M34	Standard A (OTCM 36841).
M34A1	Standard A (OTCM 36841).
M34A2	Standard A (OTCM 36841).
M34A2C	Standard A.

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* For characteristics and data, see item in sections 7 and 23.

CHARACTERISTICS

Length	9⅝ in.
Width	8⅝ in.
Height	4½ in.
Weight	5¾ lb
Limits of operation:	
Elevation	1,600 mils (90°)
Depression	200 mils (11.25°)
Field of view	12°, 12 min
Azimuth	6,400 mils (360°)

EQUIPMENT

Basic Issue Items:

M34	See ORD 7 SNL C-74
M34A1	See ORD 7 SNL A-55
M34A2	See TM 9-2300-203-12
M34A2C	See TM 9-1055-212-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 8 sightunits per shipping container

Length	1 ft, 9 in.
Width	1 ft, 1½ in.
Height	1 ft, 1¾ in.
Volume	2.2 cu ft
Gross weight	56.5 lb
Ship tons	0.06

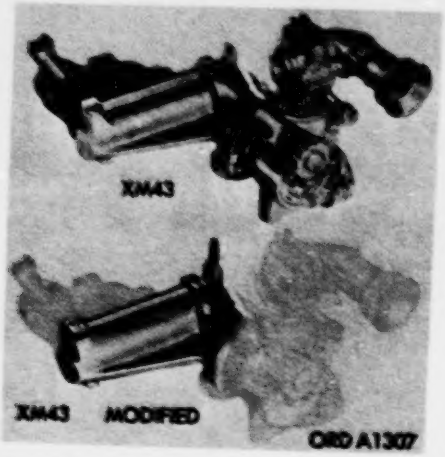
Outside Continental United States

Shipped 8 sightunits per shipping container

Length	1 ft, 9 in.
Width	1 ft, 1½ in.
Height	1 ft, 1¾ in.
Volume	2.2 cu ft
Gross weight	56.5 lb
Ship tons	0.06

References: TM 9-1240-298-35, SNL F-366.

SIGHTUNIT: XM43 AND XM43 MODIFIED



Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM43	....	1240-674-1383
XM43 modified	....	1240-674-1383

General

SIGHTUNIT, XM43 is composed of TELESCOPE, ELBOW: M62A1C; ADAPTER, TELESCOPE: M9A1; and a telescope mount assembly which is a modification of MOUNT, TELESCOPE: M79, and a dove-tail mount assembly.

SIGHTUNIT, XM43 modified is used with LAUNCHER, ROCKET: 762-mm, M33. It is composed of TELESCOPE, ELBOW: M62A1D; ADAPTER, TELESCOPE: M9A1; and MOUNT, TELESCOPE: 8228899.

The sightunits are used for boresighting and indirect fire sighting operations.

Differences among models

The sightunits XM43 and XM43 modified differ in their components as listed in "GENERAL" above.

Data plate location

There are three identification plates (nameplates) on the sightunit, located as follows: The identification plate for the sightunit and mount assembly are located on the lower left side of the sightunit and the identification plate for the elbow telescope is located on the triangular-shaped cover below the rubber eyeshield on the upper left side of the sightunit.

Classification: Standardization pending.

CHARACTERISTICS

Length	1 ft, 2½ in.
Width	7⅞ in.
Height	7⅛ in.
Weight	10 lb, 8 oz
Elevation	1,600 mils (90°)
Depression	200 mils (11.5°)
Out-of-level correction	±10° max

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-204-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Domestic Pack

Shipped 1 sightunit per shipping container

Length	1 ft, 5⅛ in.
Width	11½ in.
Height	6⅞ in.
Volume	0.778 cu ft
Gross weight	13½ lb
Ship tons	0.019

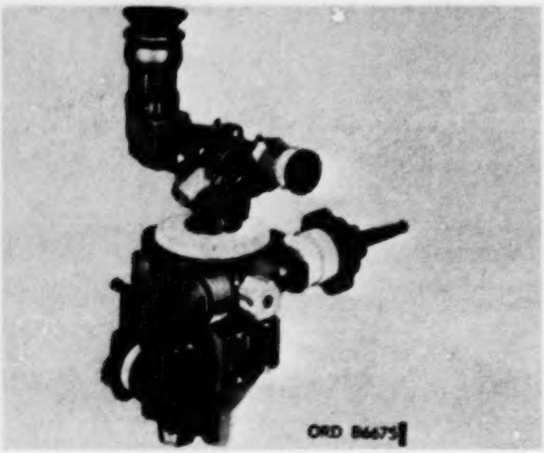
Oversea Pack

Shipped 1 sightunit per shipping container

Length	1 ft, 5⅛ in.
Width	11½ in.
Height	6⅞ in.
Volume	0.778 cu ft
Gross weight	13½ lb
Ship tons	0.019

References: TM 9-1240-283-35P.

SIGHTUNIT: M53 (XM53E2)



Model	*Line item No.*	*Federal stock No.*
M53		1240-856-9452

General

SIGHTUNIT: M53 (XM53E2) consists of TELESCOPE, ELBOW: M109* and MOUNT, TELESCOPE: M128E2 and is intended to replace SIGHTUNIT: M34A2** for mortars and rocket launchers and also the developmental sightunit for BATTLE GROUP ATOMIC WEAPON SYSTEM: M28** and M29.**

The telescope is supported in the rotating head of the telescope mount which dovetails into a slot in a bracket on the weapon. A locking device, operated by a lever on the mount, secures the sightunit in the dovetailed slot. Worm mechanisms, scales, knots, and radioactive leveling vials for adjusting the sightunit in elevation and azimuth are on the mount.

The sightunit is used with LAUNCHER, ROCKET: multiple, 115-mm, M91.**

LIGHT, INSTRUMENT: XM53 is used with the sightunit.

Differences among models

Data plate location

Classification: Standard A (OTCM 38113).

CHARACTERISTICS

Length	6 in.
Width	5 in.
Height	10 in.
Weight	5.25 lb
Magnification	4 power
Field of view	10 deg
Diameter of exit pupil	0.150 in.
Diameter of entrance pupil	0.600 in.
Equivalent focal length of objective	3.200 in.
Equivalent focal length of eyepiece	0.800 in.

Limits of operation:

Elevation	1,600 mils (90 deg)
Depression	200 mils (11.25 deg)
Azimuth	6,400 mils (360 deg)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-213-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 sightunit per shipping container.

Length	13 in.
Width	12 in.
Height	10 in.
Volume	0.9 cu ft
Gross weight	10 lb
Ship tons	0.005

Outside Continental United States

Shipped 1 sightunit per shipping container.

Length	13 in.
Width	12 in.
Height	10 in.
Volume	0.9 cu ft
Gross weight	10 lb
Ship tons	0.005

References: TM 9-1240-287-35P, TM 9-1240-287-34.

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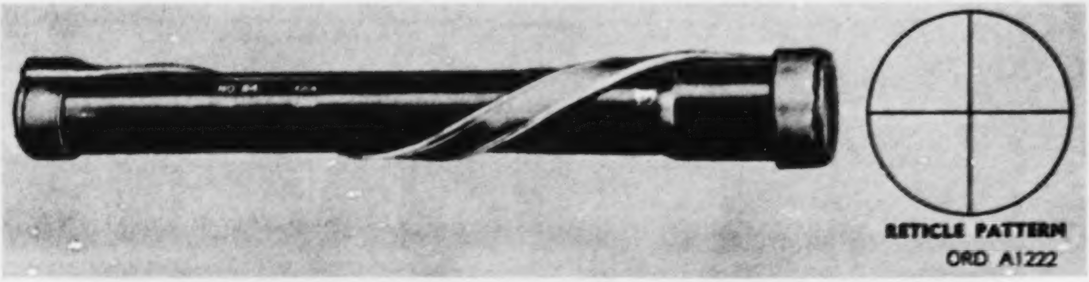
* Characteristics and data to be included at a later date.

** For characteristics and data, see item in sections 4, 5, and 7 on pages 14—65.

TELESCOPE: M7



ORD A1222

Model	*Line item No.*	*Federal stock No.*
M7		

General

TELESCOPE: M7 is a straight tube telescope which is provided with two dust caps retained by a carrying strap. It is characterized by a large, bright field of view and has no magnification.

The telescope M7 is used as a component of several sighting instruments for tracking moving targets in elevation and azimuth.

Differences among models

Data plate location

The identification data are located on the tube toward the rear.

Classification:

CHARACTERISTICS

Magnification	1 power
Field of view	11°

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 40 telescopes per box (w/equipment).

Length	2 ft
Width	1 ft. 3 in.
Height	11 in.
Volume	2.3 cu ft
Gross weight	70 lb
Ship tons	0.06

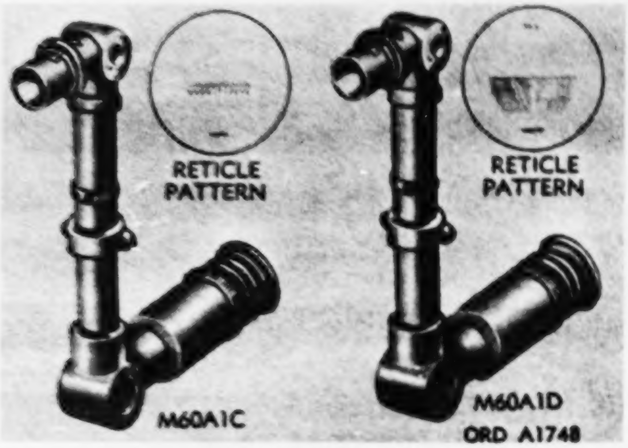
Outside Continental United States

Shipped telescopes per box (w/equipment).

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-183. TM 9-1603.

TELESCOPE: M60A1C AND M60A1D



Secondary item

Model	*Line item No.*	*Federal stock No.*
M60A1C		1240–789–7806
M60A1D		1240–789–7807

General

TELESCOPE: M60A1C or M60A1D is a periscope-type telescope in which the line of sighting is about 12 inches higher than the line of viewing. It consists of an objective, two erectors, eyepiece assembly, two 45° prisms, reticle, and filters. A fluted, soft rubber eyeshield is fitted on an adapter which is screwed to the eyepiece assembly. Three interchangeable filters, red, amber, and neutral, are furnished with each telescope. The red and amber filters are used for observing under haze and glare conditions while the neutral filter is useful for observing targets in the direction of the sun. Any one of the filters can be slipped into the end of the eyepiece after unscrewing the knurled eyeshield adapter.

Telescope M60A1C or M60A1D is components of SIGHTING SYSTEM, AUXILIARY: M7 (P. 14–68), with the MOUNT, GUN: 90-mm, antiaircraft artillery, M2 and M2A1. Telescope M60A1C is used on the elevation side, and telescope M60A1D on the azimuth side.

Differences among models

Telescopes M60A1C and M60A1D differ principally in the reticle pattern which is seen through the eyepiece superimposed on the target.

Data plate location

The identification plate of telescope M60A1C or M60A1D is located on the elbow housing assembly.

Classification:

M60A1C	Standard C
M60A1D	Standard C

CHARACTERISTICS

Magnification	8X
Azimuth range	no limit
Elevation:	
Range limits	−175 to +270 mils
Total range	445 mils
Field of view	18°, 25 min
Lateral deflection (lead) reticle:	
Filters	amber, neutral, red

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D–38.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

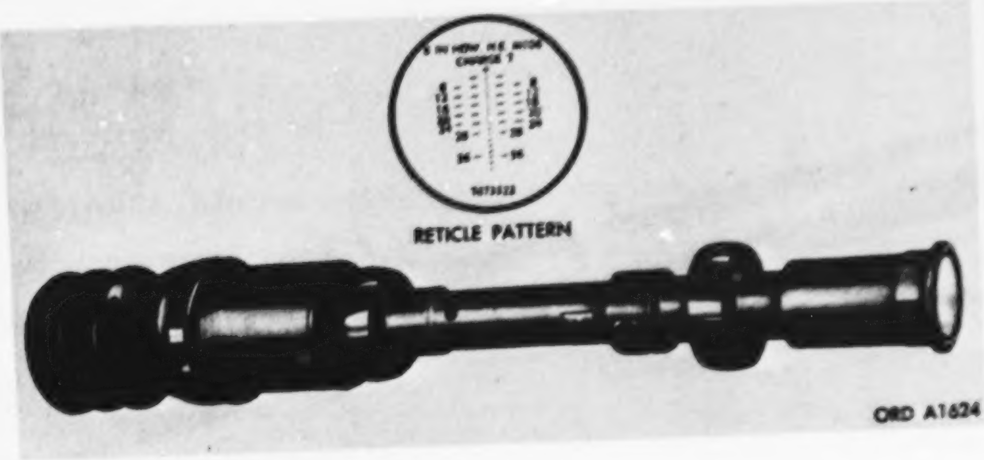
Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F–252, TM 9–6047.

TELESCOPE: M69G



Model	*Line item No.*	*Federal stock No.*
M69G		1240-678-4689

General

TELESCOPE: M69G is used on mobile artillery for direct sighting. This telescope is slender with an enlarged eyepiece. The reticle pattern is etched on the plane surface of a plano-convex lens for the ammunition for which the reticle is graduated.

Differences among models

Data plate location

The identification plate (nameplate) is located on the telescope tube directly behind the front collar.

Classification:

CHARACTERISTICS

Length
Diameter
Weight
Limits of operation: ...3 power
  Magnification ...10°, 24 min
  Field of view

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

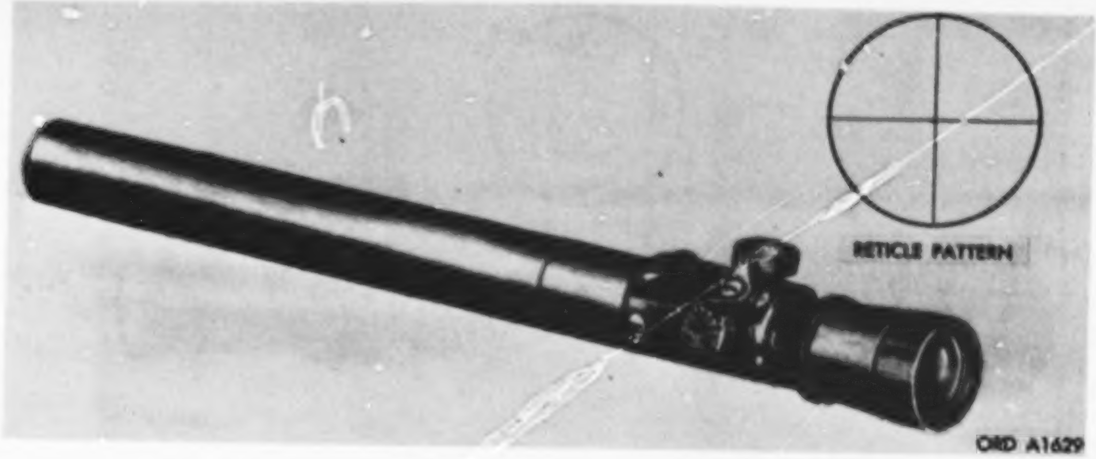
Shipped telescope per
  Length
  Width
  Height
  Volume
  Gross weight
  Ship tons

Outside Continental United States

Shipped telescope per
  Length
  Width
  Height
  Volume
  Gross weight
  Ship tons

References: SNL F-235, TM 9-1603.

TELESCOPE: M73B1



Model	*Line item No.*	*Federal stock No.*
M73B1		1240-757-0981

General

TELESCOPE: M73B1 is a slender sighting device used on light mobile artillery and rifles. The image is erected by mirrors. The reticle is a cross-wire type. Two adjusting knobs in the telescope body tube move the reticle for elevation and windage adjustment. The telescope when unserviceable is to be replaced by TELESCOPE: M84.*

Differences among models

Data plate location

The identification plate (nameplate) is located on the top of the telescope tube.

Classification:

CHARACTERISTICS

Length
Width
Height
Weight
Limits of operation:
  Magnification .... 2.2 power
  Field of view .... 6°, 30 min
Range, elevation yards:
  Maximum line
  Maximum figure
Range deflection .... 14-0-14 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped telescope per
  Length
  Width
  Height
  Volume
  Gross weight
  Ship tons

Outside Continental United States

Shipped telescope per
  Length
  Width
  Height
  Volume
  Gross weight
  Ship tons

References: SNL F-289, TM 9-1608.

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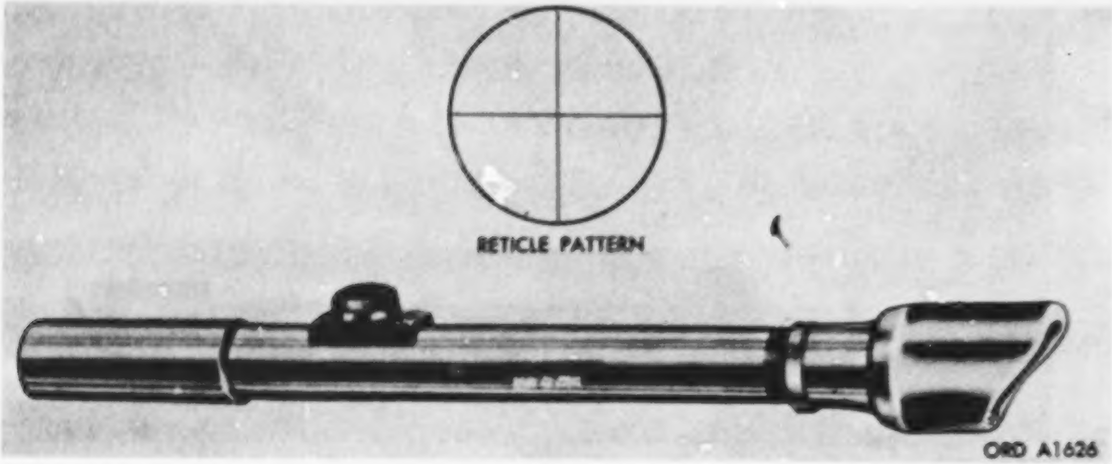
*For characteristics and data, see item on page 14-73.

TELESCOPE: M81



Model	*Line item No.*	*Federal stock No.*
M81		1240-750-7767

General

TELESCOPE: M81 is used on light mobile artillery and rifles. It is a slender-type device equipped with a rubber eyeshield and a rain-sun shield. The reticle is a cross-wire type. The image is erected by erecting lenses. Two knobs provide horizontal and vertical movement of the reticle. The telescope when unserviceable is to be replaced by TELESCOPE: M84.*

Differences among models

Data plate location

The identification plate (nameplate) is located on the right side of the tube, approximately midway along the length.

Classification:

CHARACTERISTICS

Length	
Diameter	
Width	
Limits of operation:	
Magnification	2.2 power
Field of view	4°, 30 min
Range, elevation yards:	
Maximum line	
Maximum figure	
Range deflection	14-0-14 mils

*For characteristics and data, see item on page 14-73.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

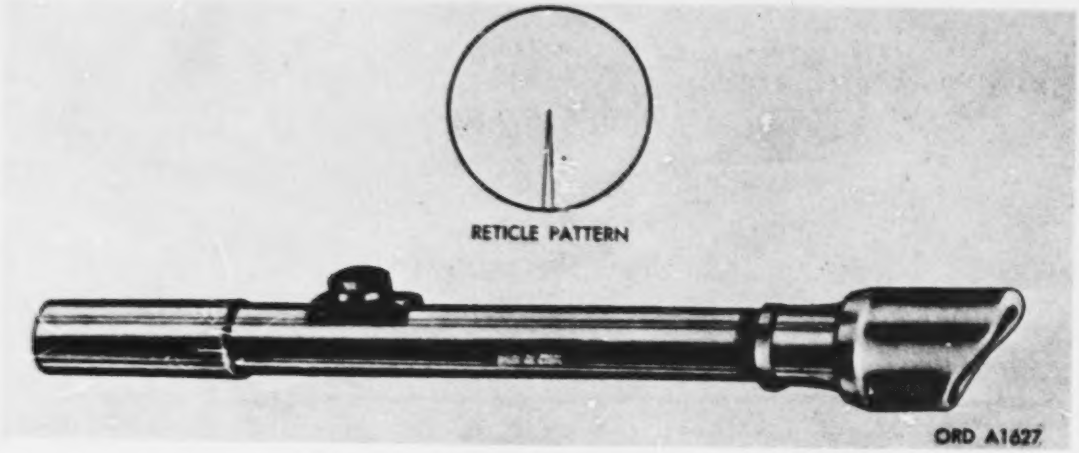
Shipped telescopes per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped telescopes per
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-289, TM 9-1603.

TELESCOPE: M82



Major item

Model	*Line item No.*	*Federal stock No.*
M82		1240-759-7767

General

TELESCOPE: M82 is used on light mobile artillery and rifles. It is a slender-type device equipped with a rubber eyeshield and a rain-sun shield. The reticle is a tapered post type. The telescope when unserviceable is to be replaced by TELESCOPE: M84.*

Differences among models

Data plate location

The identification plate (nameplate) is located on the right side of the tube, approximately midway along the length.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length
Diameter
Weight
Limits of operation:
  Magnification .... 2.2 power
  Field of view .... 4°, 30 min
  Range, elevation yards:
    Maximum line
    Maximum figure
  Range deflection .... 14-0-14 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped telescopes per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped telescopes per
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-289, TM 9-1603.

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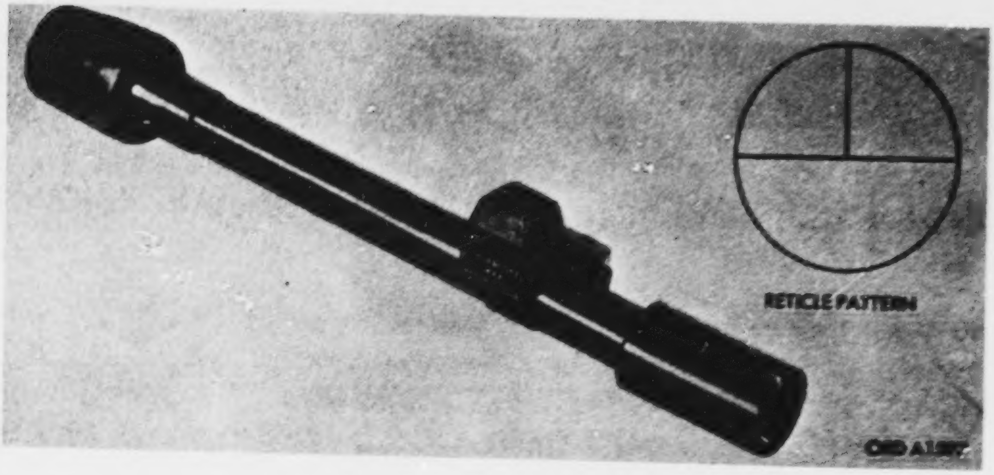
*For characteristics and data, see item on page 14-73.

TELESCOPE: M84



Major item

Model	*Line item No.*	*Federal stock No.*
M84		1240-759-7774
M84, w/e		1240-678-4690

General

TELESCOPE: M84 is of the straight tube type with a fixed focus, used for direct sighting. It is used as a sniper's sighting device with RIFLE, CALIBER .30: M1C and M1D for accurate fire. This telescope has a large bright field of view. It uses a sunshade to shade the objective and prevent reflections and an eyeshield to position the observer's eye. It has an elevation range knob graduated from 0 to 900 yards in 50 yard intervals, which corresponds to an elevation of 12.1 mils. A windage knob having a range of 20 minutes right or left is used to correct drift.

This telescope uses LIGHT, INSTRUMENT: M36 for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is attached to the tube.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length (without eyeshield):	
Sunshade retracted	11.875 in.
Sunshade extended	12.188 in.
Length (with eyeshield):	
Sunshade retracted	12.875 in.
Sunshade extended	13.188 in.
Power	2.2X
Field of view	6°, 22 min
Knob movement:	
Range	0 to 900 yd
Windage	20 min L to 20 min R

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

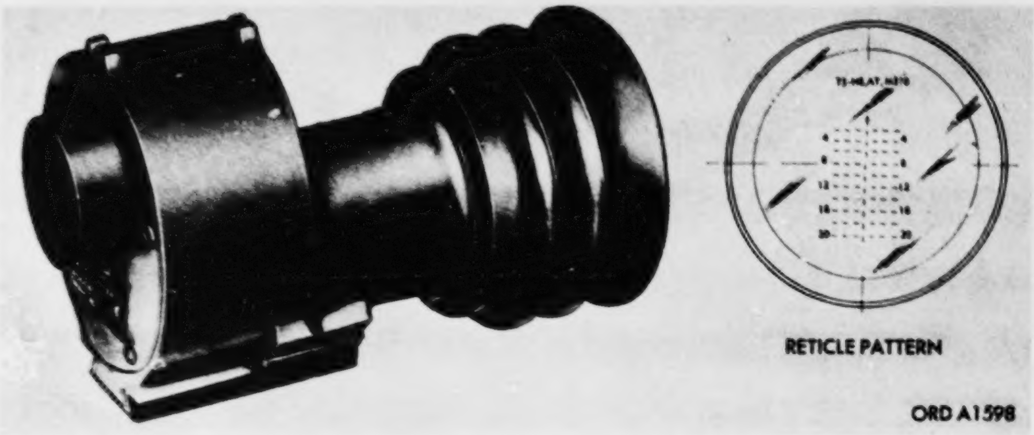
Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-259, TM 9-6131.

TELESCOPE: M85C AND M85A1C



ORD A1598

Major item

Model	*Line item No.*	*Federal stock No.*
M85C		1240-759-7776
M85C, w/e		1240-678-4691
M85A1C		1240-759-7775
M85A1C, w/e		1240-678-4692

General

TELESCOPE: M85C and M85A1C (fixed-focus type) is used with RIFLE, 75 MILLIMETER: M20 and M21E12 for direct fire. The telescope is mounted in a dovetail slot in MOUNT, TELESCOPE: M78 which is attached to the rifle. The reticle pattern is for CARTRIDGE, 75 MILLIMETER: HE, AT, M310. LIGHT, INSTRUMENT: M36, is used with these telescopes for night operation.

Differences among models

The telescope M85A1C is the same as the telescope M85C except that the M85A1C has an improved method of mounting the mirror holder.

Data plate location

The identification plate (nameplate) is located on the objective adapter.

Classification:

M85C ....Limited Standard (for training) (OTCM 37284).
M85A1C ....Limited Standard (OTCM 37284).

CHARACTERISTICS

Magnification	3X
Field of view	11°, 30 min
Range, elev:	
Max line	2,000 yd
Max figure	2,000 yd
Range, deflection mils	30-0-30

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M85C only

Within Continental United States

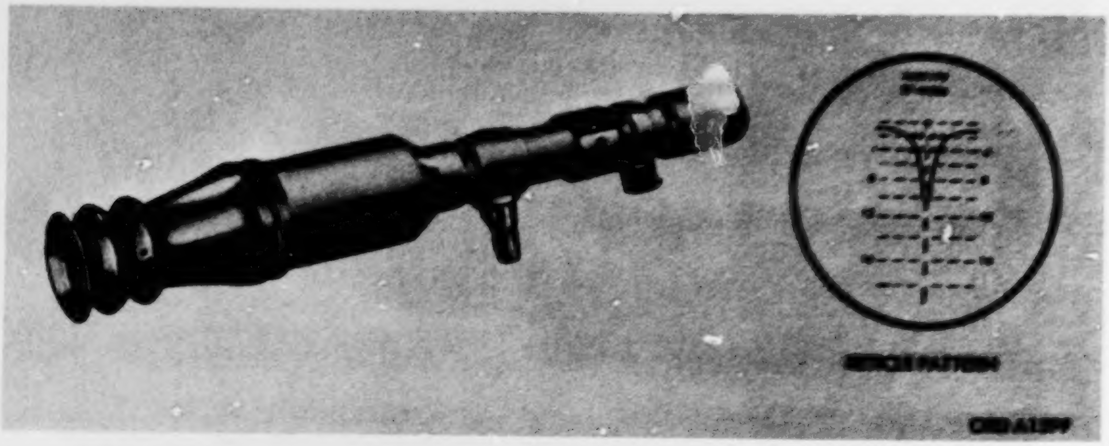
Shipped per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-310, TM 9-1603.

TELESCOPE: M86F (M86C)



Major Item

Model	*Line item No.*	*Federal stock No.*
M86F		1240-759-7852
M86F w/e		1240-678-4696

General

TELESCOPE: M86F (M86C) is used with MOUNT, SIGHT: M74 and SIGHT, FRONT: M26 on RIFLE, 57 MILLIMETER: M18 and M18A1, for direct firing of CARTRIDGE, 57 MILLIMETER: HE, M306 or M306A1. The telescope is secured in a rear sight mount which is in turn secured to the rifle so that the telescope and mount move with the rifle in azimuth and elevation. The gunner uses the graduations on the stadia reticle, which with a rod of definite length measures the distance to the target. Then, aims with that part of the reticle which represents the desired deflection and range. The reticle may be illuminated with LIGHT, INSTRUMENT: M32 for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the body shoulder.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Magnification	2.8X
Field of view	7°, 3 min
Range, elev:	
Max line	1,800 yd
Max figure	1,600 yd
Range, deflection mils	30-0-30

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

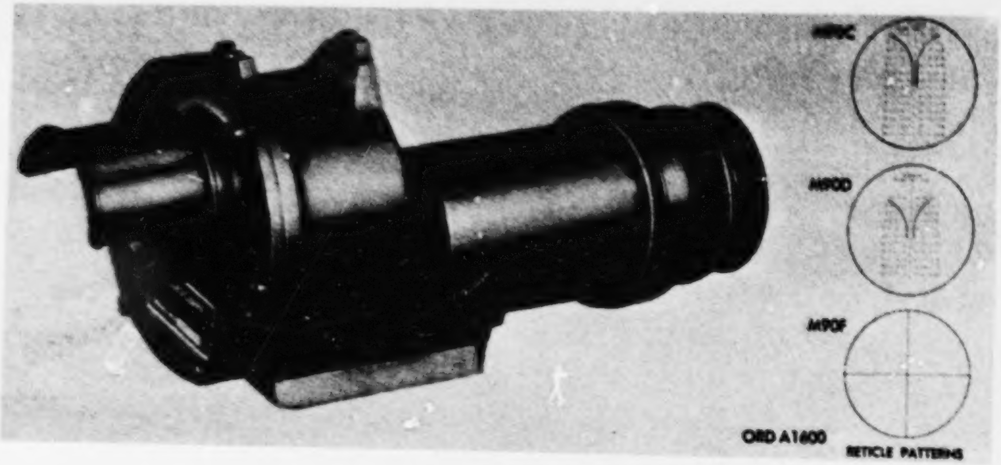
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-235, vol. 13; TM 9-1603.

TELESCOPE: M90C, M90D, AND M90F



ORD A1600

RETICLE PATTERNS

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M90C	....	1240-764-8432
M90D	....	1240-759-7853
M90F	....	1240-601-4065

General

TELESCOPE: M90C (T127E3) is used for direct fire with RIFLE, 105 MILLIMETER: M27A1. TELESCOPE: M90D, is used for direct fire with RIFLE, 75 MILLIMETER: M20 and T21E12. TELESCOPE: M90F, is used with the HAWK MISSILE SYSTEM. These telescopes are of the fixed-focus type, having an offset in the geometric and optical axis. They include objective cover, eyepiece, body assembly, eyeshield, and sunshade. The body houses a prism-type erecting system. The telescope has a stadia reticle. It has an open sight on top of the body.

Differences among models

These telescopes are identical, except for the reticles.

Data plate location

The identification plate (nameplate) is on the cover assembly.

Classification:

M90C	Standard C (OTCM 37119).
M90D	Standard A.
M90F	Limited production (OTCM 37084).

CHARACTERISTICS

Magnification	3X
Field of view	13°, 20 min
Filter	none
Range, elev:	
Max line	2,600 yd
Max figure	2,600 yd
Deflection	30-0-30

PERFORMANCE

EQUIPMENT

Basic Issue Items:
M90D—See ORD 7 SNL C-74
M90F—See TM 9-1410-500-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 60 telescopes per shipping container

Length	2 ft, 4½ in.
Width	1 ft, 4½ in.
Height	1 ft, 7 in.
Volume	5.165 cu ft
Gross weight	190 lb
Ship tons	0.13

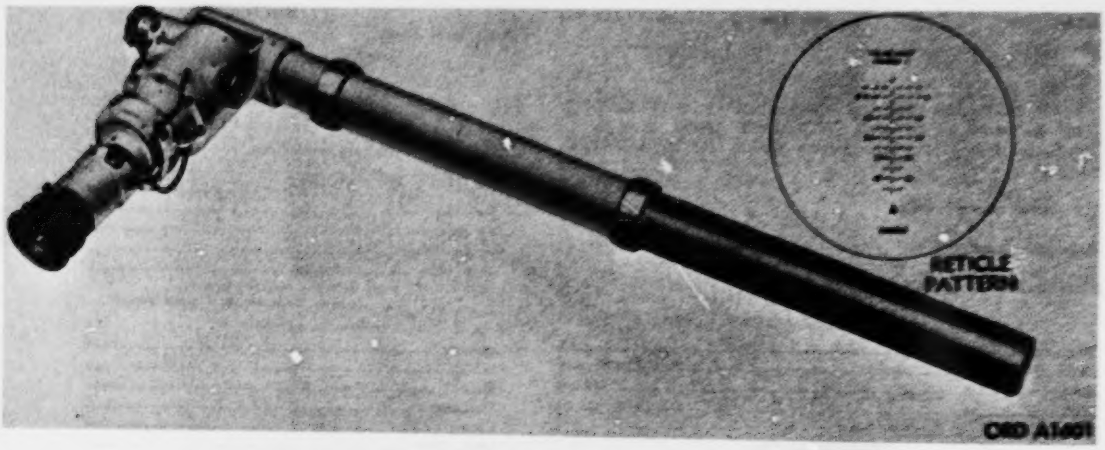
Outside Continental United States

Shipped 60 telescopes per shipping container

Length	2 ft, 4½ in.
Width	1 ft, 4½ in.
Height	1 ft, 7 in.
Volume	5.165 cu ft
Gross weight	190 lb
Ship tons	0.13

References: TM 9-1240-211-35P.

TELESCOPE: M93 (T153)



Model	*Secondary item* *Line item No.*	*Federal stock No.*
M93		1240–344–4672

General

TELESCOPE: M93 (T153), is used with MOUNT, TELESCOPE: M96 to enable the laying of HOWITZER, SELF-PROPELLED, FULL-TRACKED: 155-mm, M44 in direct fire. It is a 4-power instrument with a 10° field of view. It consists essentially of a tube containing fixed-positioned optical elements and an elbow assembly with both optical elements and mechanical components. Cant correction is accomplished by means of a coupling which engages the drive shaft of the cant corrector on the mount to rotate the eyepiece assembly between "0" and 15° in either direction.

Differences among models

Data plate location

An identification plate (nameplate) is located on elbow of telescope.

Classification: Standard A.

CHARACTERISTICS

Overall dimensions (max):

Length	41.75 in.
Width	17 in.
Height	4.75 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–7004.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

References: TM 9–6029, TM 9–7004, TM 9–1240–221–35P.

TELESCOPE: M94 (T167)

Model	*Line item No.*	*Federal stock No.*
M94 (T167) --		

General

TELESCOPE: M94 (T167), is interchangeable with TELESCOPE: M90C (p. 14-66) on MOUNT, TELESCOPE: M85*.

Telescope M94 (T167) is used with RIFLE, 105 MILLIMETER: M27A1.

Differences among models

Data plate location

Classification: Unclassified (OTCM 35345).

CHARACTERISTICS

Magnification -- 3X
Field of view -- 13°, 30 min
Reticle range -- 7,800 yd
Weight -- 1 lb, 14 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped telescopes per box
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped telescopes per box
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References:

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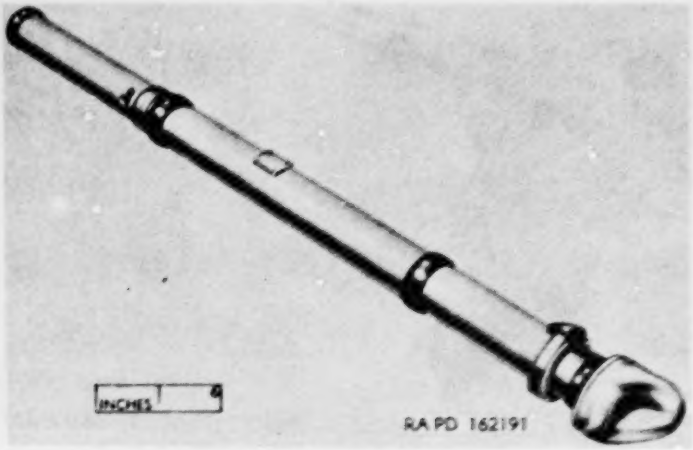
* For characteristics and data, see item in section 18.

TELESCOPE: M97 (T156), M97C (T156E1), M97D, M97F, M97G, AND M97H



Model	*Line item No.*	*Federal stock No.*
M97 (T156)		1240-360-1593
M97C (T156E1)		1240-344-4646
M97D		1240-600-2830
M97F		1240-766-0917
M97G		1240-732-1470
M97H		1240-732-1469

General

TELESCOPE: M97 (T156), M97C (T156E1), M97D, M97F, M97G and M97H, is direct sighting straight tube telescopes. The M97 is used for direct fire with MOUNT, TELESCOPE: M92 (T176) in 76-mm gun tank M41 (T41E1) and with MOUNT, TELESCOPE: M92A1 (T176E1) in 76-mm gun tank M41A1 (T41E2). TELESCOPE: M97C (T156E1), is used with MOUNT, TELESCOPE: M108 (T191) as a member of the direct fire instrument group in 90-mm gun tank M48 series. LIGHT, INSTRUMENT: M36, is used to illuminate the reticle for night operation.

Differences among models

These telescopes are identical, except for reticle pattern and finish.

Data plate location

The identification plate (nameplate) is on the flange of the eyepiece.

Classification:

M97	Standard A.
M97C	Standard A.

CHARACTERISTICS

Magnification	8X
Field of view	7°, 24 min
Effective focal length (EFL):	
Eyepiece	1.562 in.
Objective	7.348 in.
Diopter (one)	0.062
Exit pupil diameter	0.198 in.
Diameter	3⅝ in.
Length	46 in.
Weight	20 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

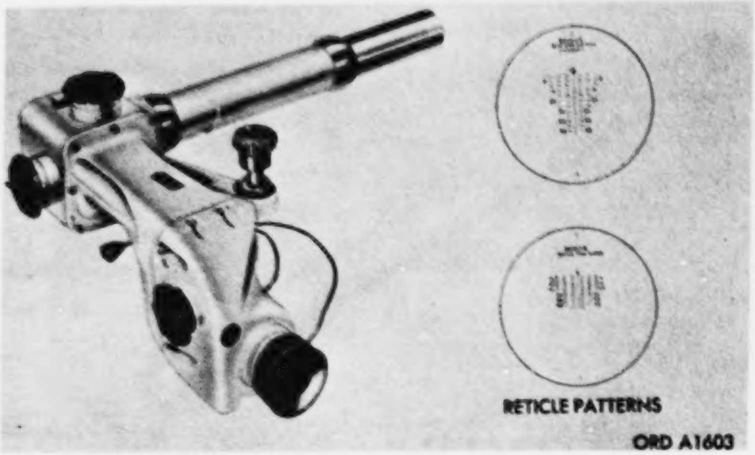
Shipped per
Length ____________
Width ____________
Height ____________
Volume ____________
Gross weight ____________
Ship tons ____________

Outside Continental United States

Shipped per
Length ____________
Width ____________
Height ____________
Volume ____________
Gross weight ____________
Ship tons ____________

References: SNL F-235, Vol. 16; TM 9-6031.

TELESCOPE: M99 (T159) AND M99C (T159E1)



ORD A1603

Secondary item

Model	*Line item No.*	*Federal stock No.*
M99(T159)		1240–300–6602
M99C(T159E1)		1240–544–4674

General

TELESCOPE: M99 (T159) and M99C (T159E1), is of the fixed-focus 4 powered elbow type. The M99 is used with MOUNT, TELESCOPE: M101 (T181) to lay GUN, SELF-PROPELLED, 155 MILLIMETER: M53 (T97) for direct fire. The M99C is used with the same mount to lay HOWITZER, SELF-PROPELLED, 8-INCH: M55 (T108) for direct fire. Boresight knobs provide adjustment of telescope, both in azimuth and elevation. A level vial and adjustment knob provide means for adjusting the reticle of telescope, to correct for cant of weapon when trunnions are out of level.

Differences among models

These telescopes are basically the same, differing in reticle pattern.

Data plate location

The identification plate (nameplate) is on the body of the telescope.

Classification: Standard A.

CHARACTERISTICS

Magnification	4X
Field of view	10
Length (max overall)	27⅝ in.
Height (max overall)	19⅝ in.
Weight (net)	36 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per

Length ....

Width ....

Height ....

Volume ....

Gross weight ....

Ship tons ....

Outside Continental United States

Shipped per

Length ....

Width ....

Height ....

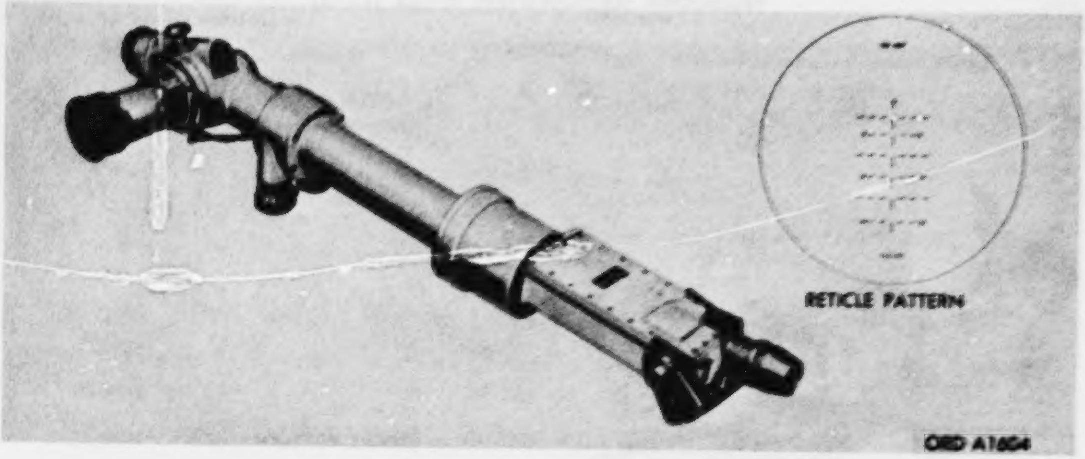
Volume ....

Gross weight ....

Ship tons ....

References: SNL F-383, TM 9-6033.

TELESCOPE: M101 (T150E1)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M101	....	1240-390-6601

General

TELESCOPE: M101 (T150E1), is used with MOUNT, TELESCOPE: M100 with periscope M23. TELESCOPE: M101 is to enable the laying of HOWITZER, SELF-PROPELLED, FULL-TRACKED: 105-mm, M52 in direct fire. It is a 4-power instrument with a 10-degree field of view. The line-of-sight is adjustable from −10 to +65 degrees. It consists essentially of a tube with fixed-positioned optical elements, elbow assembly, and compensator assembly with both optical elements and mechanical components.

Differences among models

Data plate location

An identification plate (nameplate) is located on top of compensator assembly cover.

Classification: Standard A.

CHARACTERISTICS

Overall dimensions (max):

Length	35.50 in.
Width	9.50 in.
Height	8.50 in.
Net weight	36.00 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

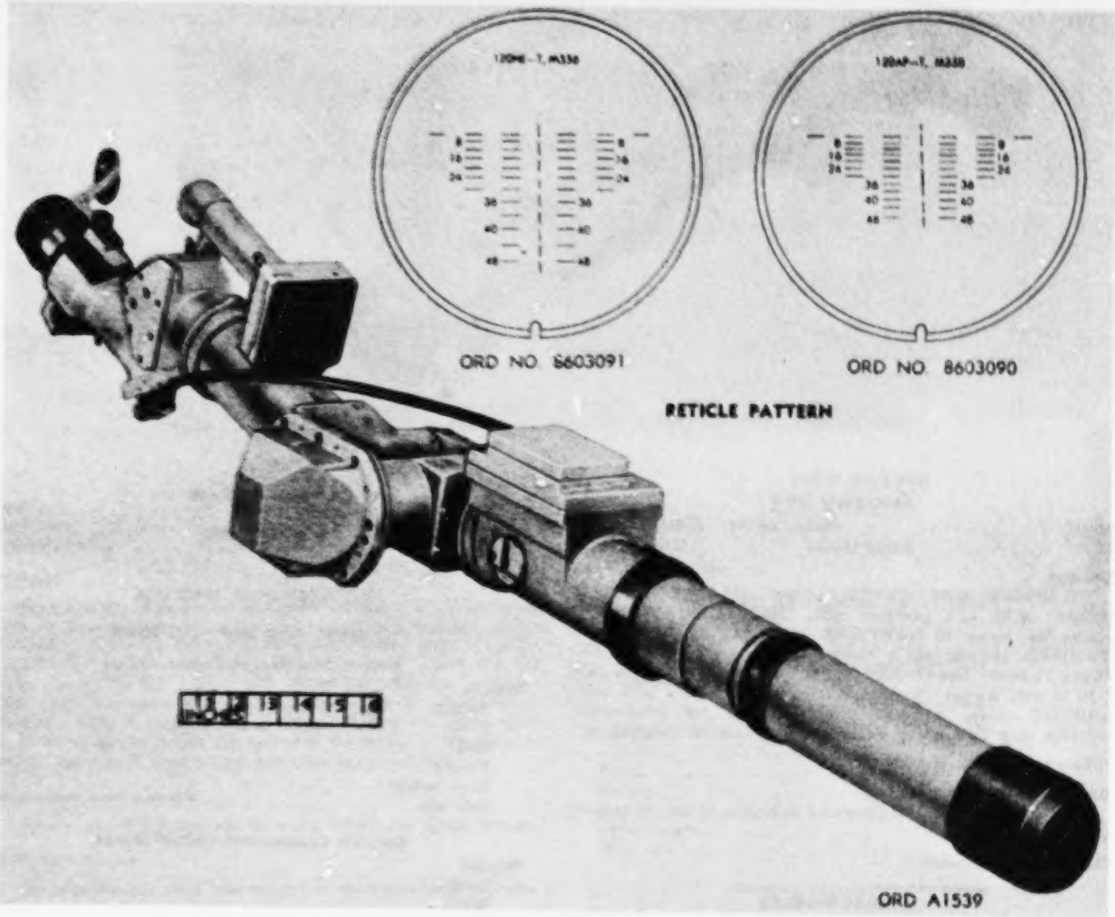
Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-6027, SNL F-274, TM 9-7204.

TELESCOPE. ARTICULATED: M102 (T172)



Secondary item

Model	*Line item No.*	*Federal stock No.*
M102		1240-610-7767

General

TELESCOPE, ARTICULATED: M102 (T172), is a hermetically-sealed 8-power instrument used in direct firing of the 120-mm gun cannon in TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1. Attached to the eyepiece is an adjustable rubber headrest. An articulated joint provides the gunner with convenient use of the eyepiece throughout the range of gun travel. The telescope has two separate reticle patterns etched on separate reticle blanks for two different types of ammunition. Both patterns are of the ballistic type and include drift lines. A push-pull lever permits either reticle pattern to be translated along the optical axis and positioned in the focal plane of the objective system. The translating mechanism insures accurate boresight retention when the patterns are interchanged. This telescope uses LIGHT, INSTRUMENT: M50 for night operation.

Differences among models

Data plate location

Plates are located on the top of the housing and main assembly of the telescope.

Classification: Standard A.

CHARACTERISTICS

Weight (w/o hanger assembly)	81 lb
Length	4 ft, 10 in.
Magnification	8 power
Field of view	7.5°
Exit pupil diameter	0.197 in. (4.8-mm)
Diopter adjustment	±4 diopters
Range reticle (AP-T116E6, HE-T15)	4,800 yd
Range of articulation	267 mils above horizontal boresight position
Effective focal length objective	12 in.
Effective focal length objective	1.5 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope per shipping container

Length	5 ft, 11½ in.
Width	1 ft, 7½ in.
Height	1 ft, 6½ in.
Volume	14.925 cu ft
Gross weight	208.2 lb
Ship tons	0.37

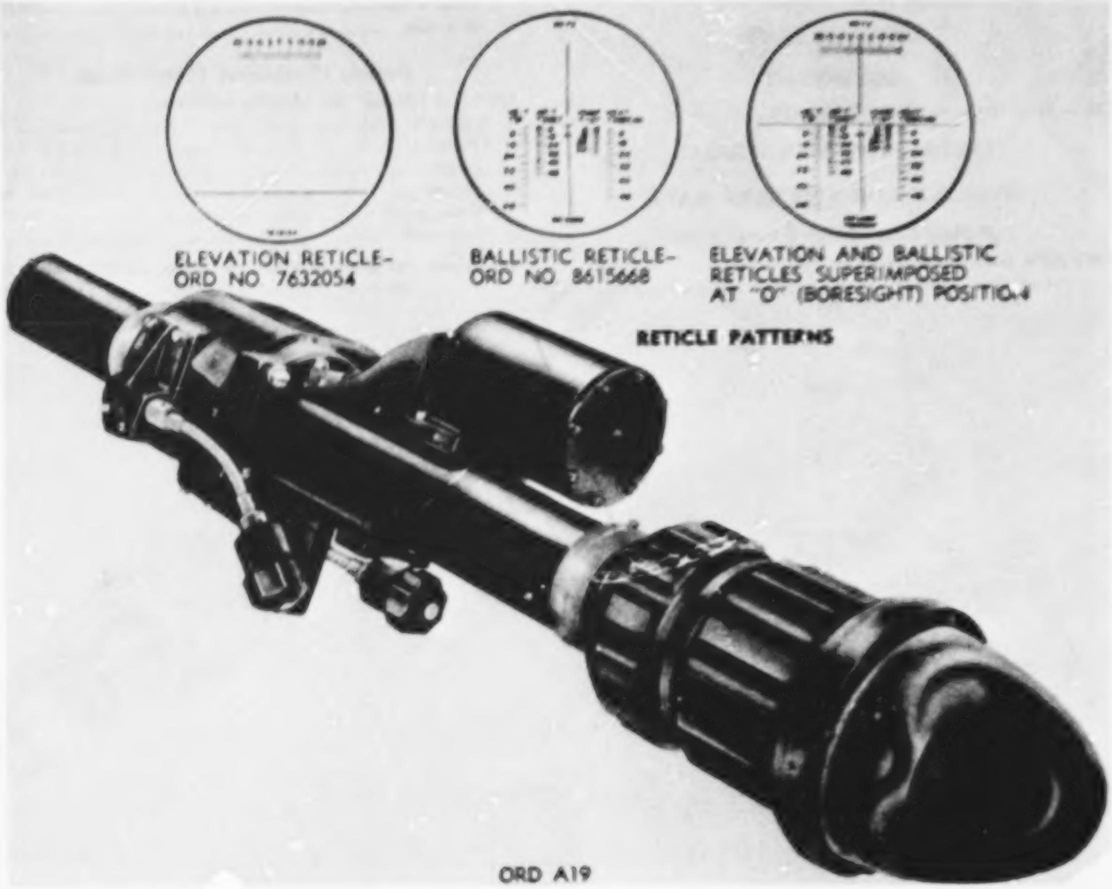
Outside Continental United States

Shipped 1 telescope per shipping container

Length	5 ft, 11½ in.
Width	1 ft, 7½ in.
Height	1 ft, 6½ in.
Volume	14.925 cu ft
Gross weight	208.2 lb
Ship tons	0.37

References: TM 9-1240-247-35P, TM 9-1240-247-35.

TELESCOPE: M104 (T186) AND M104C



ELEVATION RETICLE-
ORD NO 7632054

BALLISTIC RETICLE-
ORD NO 8615668

ELEVATION AND BALLISTIC
RETICLES SUPERIMPOSED
AT "O" (BORESIGHT) POSITION

RETICLE PATTERNS

ORD A19

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M104		1240-593-9079
M104C		1240-706-8613

General

TELESCOPE: M104 (T186) and M104C, is of the straight tube type with a lens erecting system, having variable magnification from 4.1 to 8 power which is controlled by means of an adjustable magnification ring. The diopter ring provides the means by which eyepiece adjustment is accomplished to bring the image into sharp focus. The telescope M104 (T186) or M104C is used with MOUNT, TELESCOPE: M111 (T219) on the GUN, ANTITANK, SELF-PROPELLED: full tracked, 90-mm M56 (T101) for purposes of observation and to lay the gun in azimuth and elevation for sighting and ranging on targets. The telescope elevates and deflects with the weapon, thereby maintaining a constant relative position between a centerline through the gun tube and the optical axis of the telescope. The reticle patterns of the telescope are illuminated during night operation by the LIGHT, INSTRUMENT: M56, which is supported on the MOUNT, TELESCOPE: M111 (T219).

Differences among models

The only difference between the telescope M104 and M104C is in the reticle design. The telescope M104 is calibrated in yards while the telescope M104C uses the metric system.

Data plate location

The identification plate is located on the objective and reticle assembly housing body.

Classification:

M104	Standard B (OTCM 37098)
M104C	Standard A (OTCM 37095)

CHARACTERISTICS

Magnification (variable)	4.1 to 8 power
Field of view:	
At 4.1 power	13 deg. 40 min
At 8 power	7 deg. 50 min

Length:

At 4.1 power	$28\frac{15}{16}$ in.
At 8 power	$30\frac{7}{16}$ in.
Weight	40 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-213-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope per shipping container.

Length	5 ft
Width	1 ft, $3\frac{1}{8}$ in.
Height	1 ft, $3\frac{1}{8}$ in.
Volume	8.342 cu ft
Gross weight	109.50 lb
Ship tons	0.21

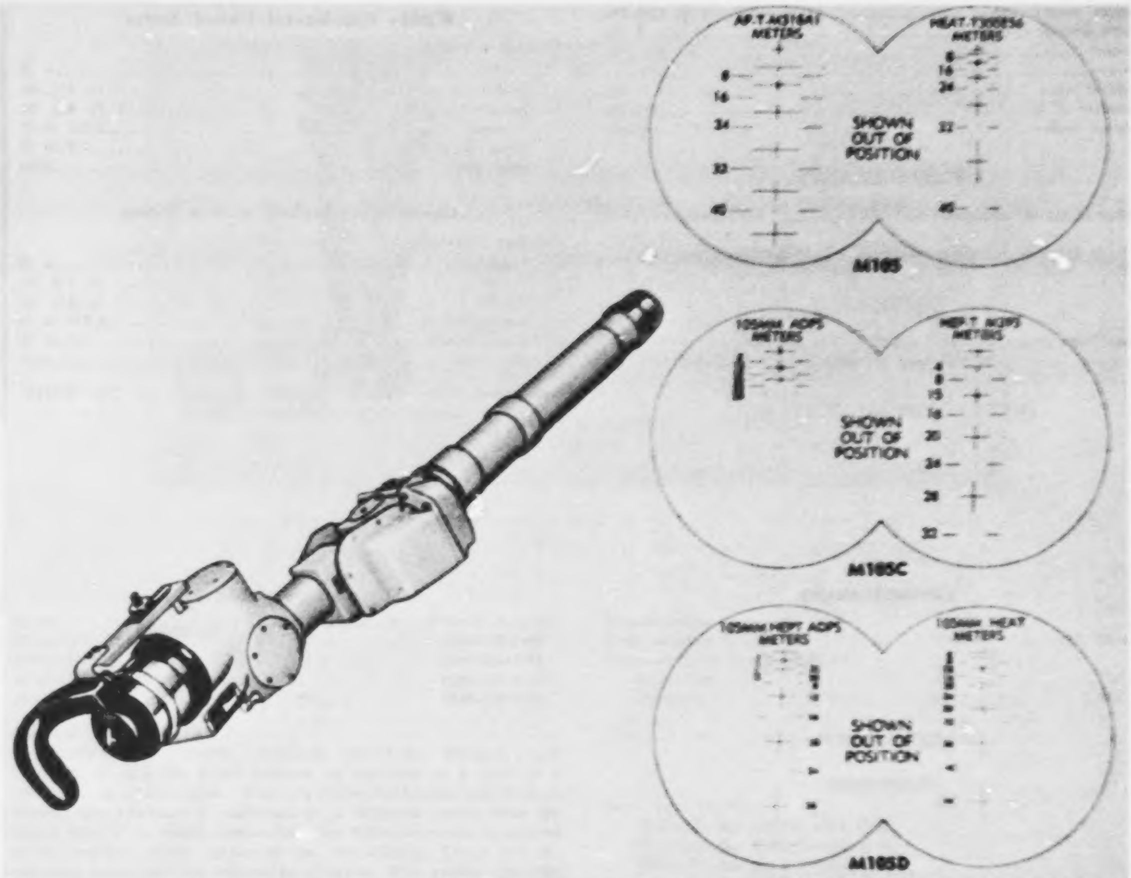
Outside Continental United States

Shipped 1 telescope per shipping container.

Length	5 ft
Width	1 ft, $3\frac{1}{8}$ in.
Height	1 ft, $3\frac{1}{8}$ in.
Volume	8.342 cu ft
Gross weight	109.50 lb
Ship tons	0.21

References: TM 9-1240-243-34, TM 9-1240-243-35P, TM 9-1240-243-50.

TELESCOPE, ARTICULATED: M105, M105C, and M105D



RETICLE PATTERNS ORD A1844

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M105		1240-970-8659
M105C		1240-676-2178
M105D		1240-980-1745

General

TELESCOPE: articulated, M105, M105C, M105D, is a sealed 8-power instrument for the direct fire control of tank guns and is designed to be utilized as a secondary sighting device. It consists of four major assemblies: the objective tube and reticle assembly, the articulated joint assembly including the erector assembly, the offset prism assembly, and the eyepiece assembly. When an object is sighted through the telescope, objective lens and collective lens in the objective tube from an inverted image of the object and superimpose the object on the reticle. After passing through prisms in the articulated joint assembly, the inverted image of the object (superimposed on the reticle pattern) is erected by the erector assembly and projected through two offset prisms to the eyepiece assembly. The offset prisms move the optical axis so the eyepiece assembly magnifies the image of the target and reticle. The external surfaces of all optical elements except the reticle blank and the reflecting surfaces of the prisms are covered with a thin coating of magnesium floride, which increases light transmission and minimizes internal reflections.

The M105 telescope is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A3;[a] the M105C with TANK COMBAT, FULL TRACKED: 105-mm gun, M60 [a] and M60A1[a] (early production models), and the M105D with TANK, COMBAT, FULL TRACKED: 105-mm gun, M60A1 [a] (later production models).

Differences among models

These telescopes are identical except for reticles, which are graduated for use with particular ammunition. One pattern for the M105 telescope contains AP-T318A1 ammunition data and the other pattern contains HEAT-T300E56 ammunition data. One pattern for the M105C telescope contains APDS-T-M392 ammunition data and the other contains HEP-T-M393 ammunition data. One pattern for the M105D telescope contains ADPS-T-M392 and HEP-TM-393 ammunition data and the other pattern contains HEAT-T-M456 ammunition data.

Data plate location

Classification: M105 —
M105C — (Data will be added at a later date)
M105D—

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[a] For characteristics and data, see item in section 23.

CHARACTERISTICS

Length overall (max)	3 ft, 10.6 in.
Width overall (max)	7 in.
Weight	53 lb, 8 oz
Power	8
Field of view	7.5 deg
Diameter of exit pupil	0.197 in.
Diopter scale	−4 to +4 diopters

PERFORMANCE

Range of travel (mounted in vehicle)	11 deg below to 22 deg above horizontal boresight position.

EQUIPMENT

Basic Issue Items: M105—See TM 9-2350-224-10.
M105C and M105D—See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 telescope per shipping container.

Length	5 ft
Width	1 ft, 3½ in.
Height	1 ft, 3½ in.
Volume	8.342 cu ft
Gross weight	109.50 lb
Ship tons	0.21

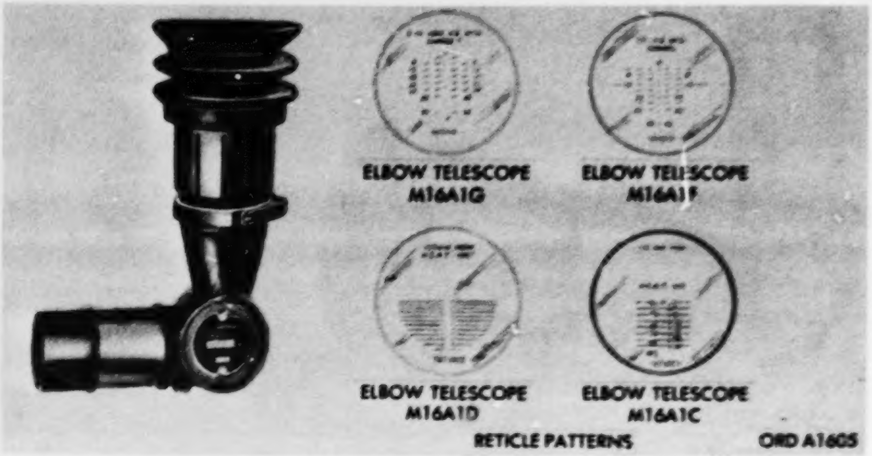
Outside Continental United States

Shipped 1 telescope per shipping container.

Length	5 ft
Width	1 ft, 3½ in.
Height	1 ft, 3½ in.
Volume	8.342 cu ft
Gross weight	109.50 lb
Ship tons	0.21

References: TM 9-1240-262-34, TM 9-1240-262-35, TM 9-1240-262-35P.

TELESCOPE, ELBOW: M16A1C, M16A1D, M16A1F, AND M16A1G



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M16A1C	....	1240-759-7780
M16A1D	....	1240-759-7781
M16A1F	....	1240-759-7782
M16A1G	....	1240-759-7783

General

TELESCOPE, ELBOW: M16A1C, M16A1D, M16A1F, and M16A1G, is used for direct sighting in elevation as a part of a two-sight, two-man system. They are of the fixed-focus type without filters. The telescope is positioned in a telescope mount with the range lines of its reticle horizontal. The telescope mount is secured to the carriage of the weapon so that the telescope mount and the telescope move with the weapon in elevation. The gunner aims the weapon with the range line of the reticle which represents the desired range. LIGHT, INSTRUMENT: M36, is used with these telescopes. These telescopes are used with telescope mounts and weapon mounts (a carriage) as follows:

Elbow Telescope	*Telescope Mount*	*Weapon mount or carriage*
M42	M16A1C	105-mm howitzer mount M4 and M4A1
M23	M16A1D	105-mm howitzer carriage M2A1 and M2A2
M71	M16A1F	155-mm gun carriage M1
M71	M16A1G	8-in. howitzer mount M17
....		8-in. howitzer carriage M1

Differences among models

These telescopes are identical except for reticles, which are graduated for use with particular ammunition. The M16A1C has a combination reticle with the left side for CARTRIDGE, 105 MILLIMETER: HE, AT, M67, MV 1250 fps, and right side for CARTRIDGE, 105 MILLIMETER: HE, M1, chg 7, MV 1550 fps.

Data plate location

The identification plate (nameplate) is on the elbow.

Classification

M16A1C	Standard A
M16A1D	Standard A
M16A1F	Standard A
M16A1G	Standard A

CHARACTERISTICS

Magnification	3X
Field of view	13°, 20 min
Effective focal length (EFL):	
Objective	4.123 in.
Eyepiece	1.374 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

M16A1C—See ORD 7 SNL C-21
M16A1D—See ORD 7 SNL C-21
M16A1F—See ORD 7 SNL D-24
M16A1G—See ORD 7 SNL D-29

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

(M16A1C and M16A1D only):

Within Continental United States

Shipped 48 telescopes per shipping container

Length	2 ft, 4⅝ in.
Width	1 ft, 6 in.
Height	1 ft, 3 in.
Volume	4.5 cu ft
Gross weight	179.75 lb
Ship tons	0.11

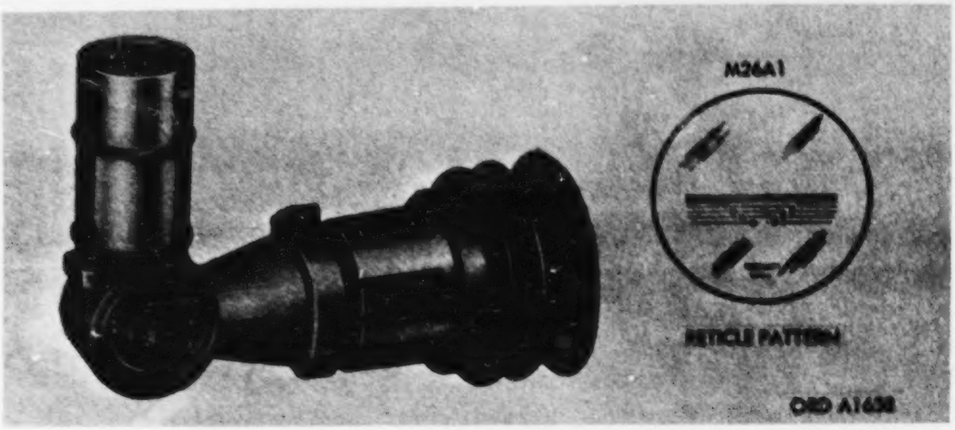
Outside Continental United States

Shipped 48 telescopes per shipping container

Length	2 ft, 4⅝ in.
Width	1 ft, 6 in.
Height	1 ft, 3 in.
Volume	4.5 cu ft
Gross weight	179.75 lb
Ship tons	0.11

References: TM 9-1604, TM 9-1240-255-35P.

TELESCOPE, ELBOW: M24A1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M24A1		1240-757-8485

General

TELESCOPE, ELBOW: M24A1, is mounted in conjunction with TELESCOPE, ELBOW: M26A1*, in MOUNT, TELESCOPE: M28*, to form a two-sight, two-man system for direct fire with the CANNON, 90 MILLIMETER GUN: M1A3 on the MOUNT, GUN: 90-mm, M1A1*. It is also used with the MOUNT, GUN: 120-mm, M1A2*. The M24A1 consists of a fixed-focus instrument with soft rubber eyeshield. It is fitted with reticle illumination windows and instrument light adapter.

Differences among models

Data plate location

An identification plate (nameplate) is located in the left cover of telescope body.

Classification: Standard A.

CHARACTERISTICS

PERFORMANCE

Field of view: 13°, 20 min. M24A1 rotates in azimuth with the gun.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped number per box

Length	1 ft, 2 in.
Width	1 ft, 2 in.
Height	2 ft, 3 in.
Volume	3.1 cu ft
Gross weight	47 lb
Ship tons	0.08

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-224, TM 9-1604.

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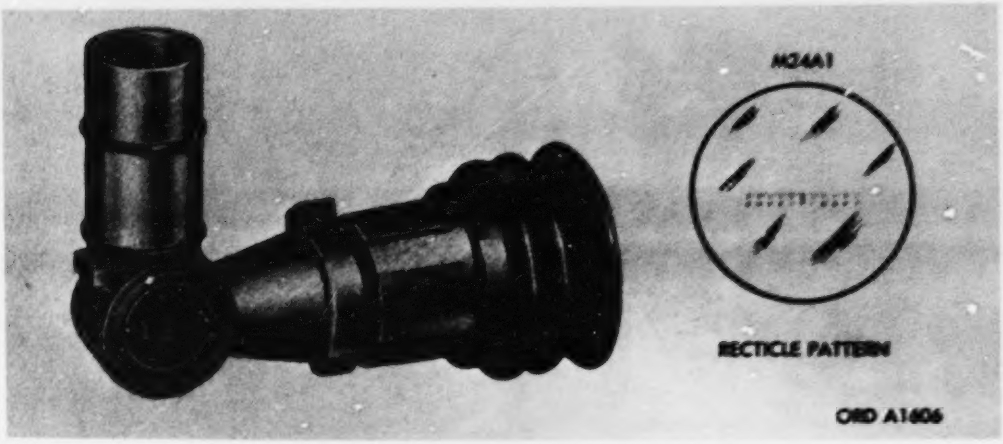
* For characteristics and data, see items on pages 14-16, 14-77, and section 4.

TELESCOPE, ELBOW: M26A1



ORD A1606

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M26A1	....	1240-757-8437

General

TELESCOPE, ELBOW: M26A1, is mounted in conjunction with TELESCOPE, ELBOW: M24A1 in MOUNT, TELESCOPE: M54 to form a two-sight, two-man system for direct fire with the CANNON, 90 MILLIMETER GUN: M1A3 on the MOUNT, GUN: 90-mm, M1A1. The M26A1 consists of a fixed-focus instrument with soft rubber eyeshield. Model is fitted with reticle illumination windows and instrument light adapter.

Differences among models

Data plate location

An identification plate (nameplate) is located in left cover of telescope body.

Classification: Standard B.

CHARACTERISTICS

Length	8⅝ in.
Width	4⅛ in.
Height	2⅞ in.
Weight	2.35 lb
Magnification	3X

PERFORMANCE

Field of view: 13°, 20 min. M26A1 rotates in elevation as well as in azimuth with the gun.

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-28.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 48 telescopes per shipping container

Length	2 ft, 4⅝ in.
Width	1 ft, 6 in.
Height	1 ft, 3 in.
Volume	4.5 cu ft
Gross weight	179.75 lb
Ship tons	0.11

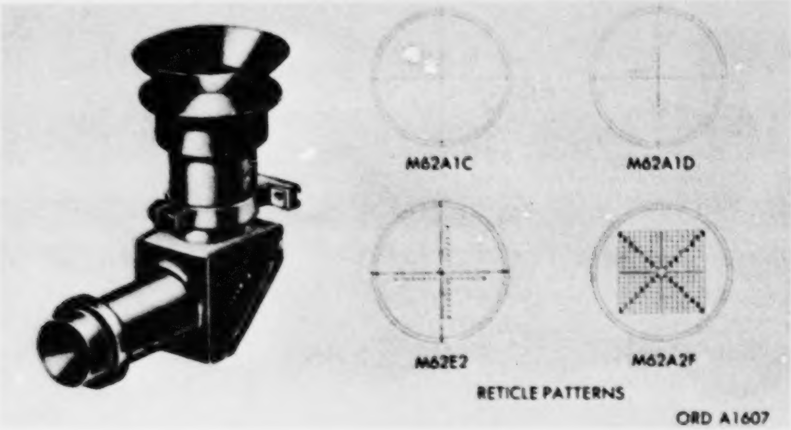
Outside Continental United States

Shipped 48 telescopes per shipping container

Length	2 ft, 4⅝ in.
Width	1 ft, 6 in.
Height	1 ft, 3 in.
Volume	4.5 cu ft
Gross weight	179.75 lb
Ship tons	0.11

References: SNL F-234, TM 9-1004.

TELESCOPE, ELBOW: M62, M62A1C, M62A1D, M62A2F, AND M62E2



RETICLE PATTERNS

ORD A1607

Secondary item

Model	*Line item No.*	*Federal stock No.*
M62	....	1240-757-9975
M62A1C	....	1240-824-3467
M62A1D	....	1240-659-4021
M62A2F	....	1240-593-6415
M62E2	....	1240-335-5041

General

TELESCOPE, ELBOW: M62, M62A1C, and M62A1D, is used as components of sightunits of the M34-series for laying a weapon in azimuth and elevation for both direct and indirect fire. The weapon is aimed by means of the reticle, the desired elevation having been set in the telescope mount and the desired azimuth or deflection having been set in the mount of the adapter of the sightunit. ADAPTER, TELESCOPE: M9, is a component of SIGHTUNIT: M34 when supporting telescope M62 and a component of SIGHTUNIT: M34A1 when supporting telescope M62A1C. Sightunits M34 and M34A1 use MOUNT, TELESCOPE: M79 in an arrangement to that with sightunit M34A2.

Telescope Elbow, M62 as a component of Sightunit M34 is used with: Launcher Rocket: Multiple 4.5-inch, M21.

Telescope Elbow, M62A1C as a component of Sightunit M34A2 is used with: Mortar: 4.2-inch, M30.

Telescope Elbow, M62A1C as a component of Sightunits M34A1 and M34A2 is used with:

Rifle: 75-mm, M20, T21E12.

Rifle: 105-mm, M27 and M27A1.

Telescope Elbow, M62A1D as a component of Sightunit M34A2C is used with:

Launcher Rocket, 318-mm, XM34.

Launcher Rocket, M91 (T145).

LaCrosse Missile System.

Telescope Elbow, M62A2F is used with Signal Corps Tracker Radar Set MPQ-4.

Telescope Elbow, M62E2 is used with Tracker Radar, M4.

LIGHT, INSTRUMENT: M46 is used with these telescopes for night operation.

Differences among models

The models are practically identical for use, except the reticles.

Data plate location

The identification including name, model designation, and serial numbers are stamped on the data surface on the left side of the elbow of the telescope.

Classification:

M62	Standard A (OTCM 37366)
M62A1C	Standard A
M62A1D	Standard A
M62A2F	
M62E2	Standard B

CHARACTERISTICS

Magnification	8X
Field of view	12°, 12 min
Diameter of exit pupil	0.15 in.
Effective focal length (EFL):	
Objective	0.362 in.
Eyepiece	0.784 in.
Adapter, telescope M9 or M9A1:	
Azimuth scale	0 to 3,200 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items:
M62A1C—See ORD 7 SNL C-20.
M62A1D—See TM 9-1055-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 telescopes per shipping container

Length	1 ft, 4½ in.
Width	10½ in.
Height	10 in.
Volume	1.01 cu ft
Gross weight	56 lb
Ship tons	0.03

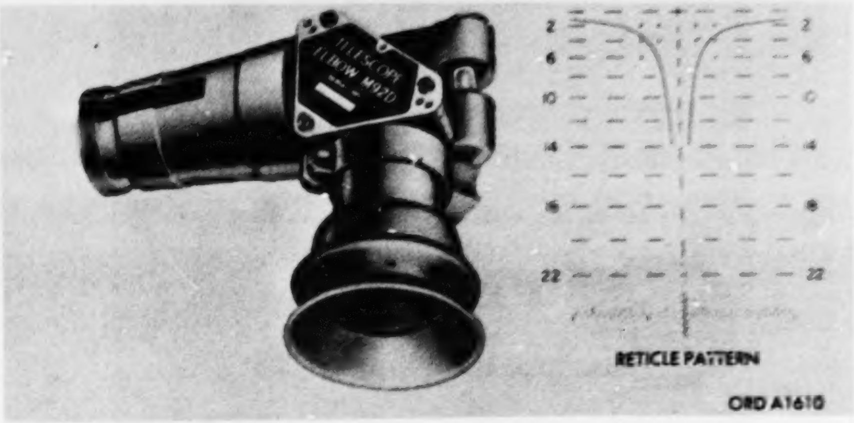
Outside Continental United States

Shipped 100 telescopes per shipping container

Length	1 ft, 4½ in.
Width	10½ in.
Height	10 in.
Volume	1.01 cu ft
Gross weight	56 lb
Ship tons	0.03

References: TM 9-1604, TM 9-1240-298-35, TM 9-1240-218-35P.

TELESCOPE, ELBOW: M92D



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M92D		1240-564-6339

General

TELESCOPE, ELBOW: M92D, is of the fixed-focus, fixed-reticle type. It is used with MOUNT, TELESCOPE: M90 (T183), which in turn mounted on the rear bracket of RIFLE, 106 MILLIMETER: M40 (T170E1) with MOUNT, 106 MILLIMETER RIFLE: M79, as a direct sight. The tapered end of the body fits the telescope mount. The level vial at elbow is used in conjunction with the cant mechanism of the mount to level the telescope. LIGHT, INSTRUMENT: M42, is used with this telescope for night operation. The lamp bracket of the instrument light is attached to the band assembly. This elbow telescope is also used with RIFLE, SELF-PROPELLED, FULL-TRACKED: multiple, 106-mm, M50.

Differences among models

Data plate location

The identification plate (nameplate) is on the elbow.

Classification: Standard A (OTCM 34899).

CHARACTERISTICS

Height	3¾ in.
Length	4 1/16 in.
Width:	
Body	1⅜ in.
Eyeshield	⅞ in.
Weight	1 lb
Magnification	1X
Field of view	12°, 12 min

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 120 telescopes per shipping container

Length	2 ft, 6¾ in.
Width	1 ft, 8 in.
Height	1 ft, 1 in.
Volume	4.37 cu ft
Gross weight	194.24 lb
Ship tons	0.11

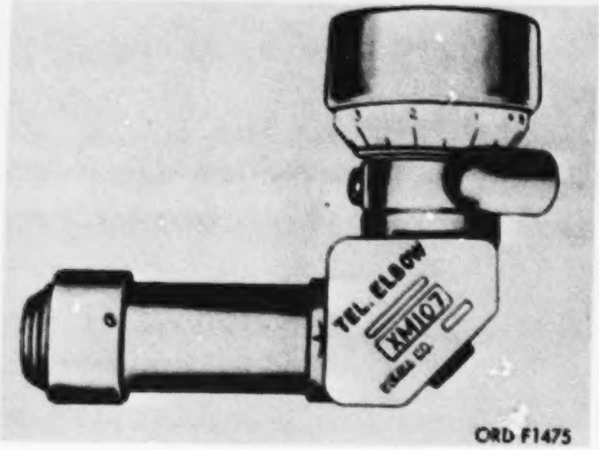
Outside Continental United States

Shipped 120 telescopes per shipping container

Length	2 ft, 6¾ in.
Width	1 ft, 8 in.
Height	1 ft, 1 in.
Volume	4.37 cu ft
Gross weight	194.24 lb
Ship tons	0.11

References: SNL F-391, TM 9-6139, TM 9-2350-212-12.

TELESCOPE, ELBOW: XM107



ORD F1475

Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM107		1240-714-2137

General

TELESCOPE, ELBOW: XM107 is mounted on MOUNT, TELESCOPE: XM117 and attached to the weapon of battle group weapon system XM28 and XM29, as a unit, by means of HOLDER, TELESCOPE MOUNT, XM5 or XM6.

The elbow telescope is a lightweight, hermetically sealed instrument. It is a focusing type instrument which provides the optical line-of-sight by which the weapon is aimed in its azimuth and elevation planes. The telescope incorporates a cross-line mil-scale reticle which can be illuminated for night operation. The reticle pattern consists of two centerlines, one horizontal and one vertical. Graduations occur every 2 mils on both lines and are numbered at every 10 mils. The numbers run from 1 to 4 representing 10 to 40 mils.

Differences among models

Data plate location

The name, model designation, and serial number of the elbow-telescope are etched on the left side of the telescope.

Classification: Standardization pending.

CHARACTERISTICS

Magnification	6-power
Field of view	7°
Diameter of exit pupil	0.100 in.
Diopter (one)	0.009 in.
Diopter scale graduation	+3½ to −3½ diopters
Length, overall	3⅝ in.
Width, overall	1⅝ in.
Height, overall	2⅞ in.
Weight	6 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1000-209-12.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 240 telescopes per shipping container

Length	2 ft, 10½ in.
Width	3 ft, 1 in.
Height	11½ in.
Volume	8.50 cu ft
Gross weight	199 lb
Ship tons	0.21

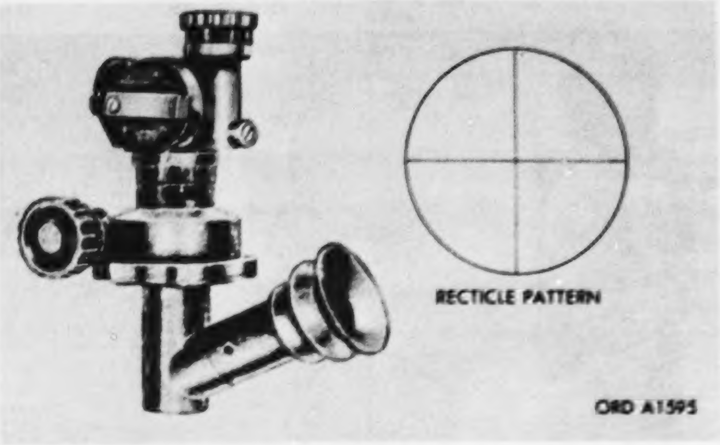
Outside Continental United States

Shipped 240 telescopes per shipping container

Length	2 ft, 10½ in.
Width	3 ft, 1 in.
Height	11½ in.
Volume	8.50 cu ft
Gross weight	199 lb
Ship tons	0.21

References: TM 9-1240-284-35, TM 9-1240-284-35P.

TELESCOPE, PANORAMIC: M1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M1		1240-757-9933

General

TELESCOPE, PANORAMIC: M1, is used, with MOUNT, TELESCOPE: M3A1 on CARRIAGE, 75 MILLIMETER, HOWITZER: M8 for CANNON, 75 MILLIMETER, HOWITZER, PACK: M1A1, in indirect fire for laying the weapon in azimuth. This telescope may also be used for direct fire. It has both azimuth and elevation mechanisms. The azimuth mechanism moves the line-of-sight through any desired angle in a horizontal plane and the elevating mechanism raises or lowers the line-of-sight as required to keep the aiming point within the field of view. The reticle has only the horizontal and vertical crosslines. LIGHT, INSTRUMENT: M13, is used with this telescope for night operation.

Differences among models

This telescope differs from the other panoramic telescopes in that it has a rotating elbow and an eyepiece slanted upward at an angle of 25 degrees, thus permitting the observer to look downward. The azimuth scale is graduated in units and is attached to the base of the rotating head. The azimuth knob is attached directly to the azimuth micrometer. The azimuth worm throw-out lever is attached to the end of the worm opposite the micrometer.

Data plate location

The identification data (name) is stamped on the cover of the rotating head.

Classification: Standard A.

CHARACTERISTICS

Azimuth scale	0-3,200, 0-3,200 mils
Elevation, above and below	300 mils
Field of vision	12 deg, 12 min
Magnification	3X
EFL:	
Objective	2.362 in.
Eyepiece	0.784 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL C-20.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 36 telescopes per shipping container

Length	2 ft, 3 in.
Width	2 ft, 1½ in.
Height	2 ft, ¾ in.
Volume	7 cu ft
Gross weight	184.5 lb
Ship tons	0.18

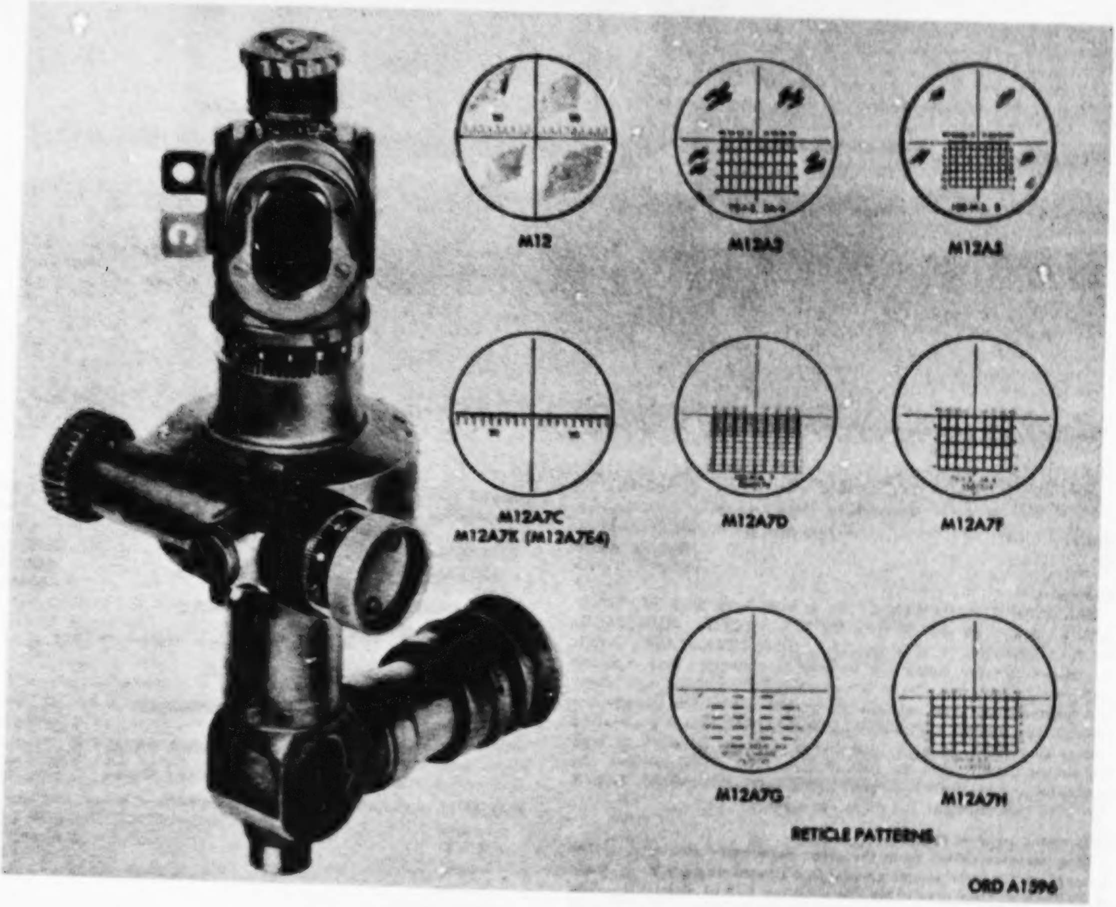
Outside Continental United States

Shipped 36 telescopes per shipping container

Length	2 ft, 3 in.
Width	2 ft, 1½ in.
Height	2 ft, ¾ in.
Volume	7 cu ft
Gross weight	184.5 lb
Ship tons	0.18

References: SNL F-106, TM 9-1240-257-35P, TM 9-6111.

TELESCOPE, PANORAMIC: M12, M12A2, M12A5, M12A7C, M12A7D, M12A7F, M12A7G, M12A7H, AND M12A7K (M12A7E4)



RETICLE PATTERNS

ORD A1596

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M12		1240-757-9986
M12A2 (to be modified to M12A7D)		1240-757-9987
M12A5 (to be modified to M12A7F)		1240-757-9979
M12A7C		1240-768-7260
M12A7D (to be converted to M12A7H)		1240-768-7261
M12A7F		1240-768-7263
M12A7G		1240-768-7262
M12A7H		1240-844-4628
M12A7K (M12A7E4)		1240-844-4632

General

TELESCOPE, PANORAMIC: M12 series, is used with telescope mounts in azimuth for indirect fire. The telescopes also may be used for direct fire. The line of sight of the panoramic telescopes may be traversed in either direction in a complete circle without changing the position of the observer.

These panoramic telescopes are used with telescope mounts and instrument lights as follows:

General—Continued

Panoramic Telescope	*Telescope Mount*	*Instrument light used for night firing*
M12	M18A1	
	M21A1	
	M25	
	M30	
	M75	M33
	M76	M19
M12A2	M21A1	
	M76	M19
M12A5	M44A1	M31
M12A7C	M18A1	M19
	M21A1	M19
	M30	M22, M35
	M69	M31
	M75	M19, M33
	M76	M19
M12A7D	M21A1	M19
	M76	M19

General—Continued

Panoramic Telescope	*Telescope Mount*	*Instrument light used for night firing*
M12A7F	M44A1	M51
M12A7G		
M12A7H		
M12A7K	M95	M34

For weapons mounts or carriages and for the weapons with which these telescopes are used, refer to the general paragraph on the pertinent mount.

Differences among models

Telescopes of the M12 series are structurally identical with the exception of the reticles used. The azimuth scale of the M12A5 is adjusted so that when scales are zeroed the optical line-of-sight is parallel to the azimuth locating surfaces. In the M12 and the M12A2, the line-of-sight is offset 45° from the locating surfaces at zero azimuth. The M12A7 series are identical with the exception of the reticle used and the positioning of the rotating head with respect to the collimating tang. The rotating heads are positioned so that when all azimuth scales and micrometers are zeroed, the rotating heads of the M12A7C, M12A7D, and M12A7G will be 45° to the left of the collimating tang. (The M12A7H will be included in the group when the M12A7D is modified to M12A7H.) The rotating head of the M12A7F will be parallel to the collimating tang and that of the M12A7K (M12A7E4) will be 45° to the right.

Data plate location

The identification plate (nameplate) is attached to the top of the rotating head.

Classification:

M12A2	Standard A
M12A5	Standard A
M12A7C	Standard A
M12A7D	Replaced by M12A7H
M12A7F	Pending obsoletion
M12A7G	Pending obsoletion
M12A7K	Standard A

CHARACTERISTICS

Magnification	4X
Field of view	10°
Height	9⅝ in.
Weight	5½ lb
Azimuth range	6,400 mils
Elevation range	600 mils
Deflection scale	20-0-20 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1056-202-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 telescopes per shipping container

Length	2 ft, 9⅛ in.
Width	2 ft, 4⅝ in.
Height	1 ft, 9⅛ in.
Volume	9.86 cu ft
Gross weight	156.5 lb
Ship tons	0.22

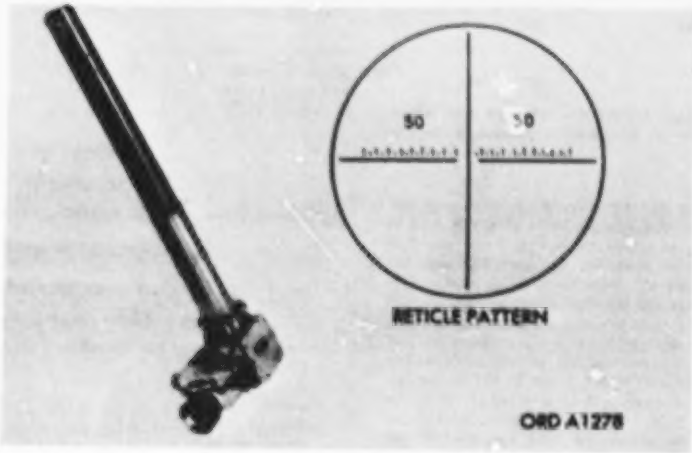
Outside Continental United States

Shipped 12 telescopes per shipping container

Length	2 ft, 9⅛ in.
Width	2 ft, 4⅝ in.
Height	1 ft, 9⅛ in.
Volume	9.86 cu ft
Gross weight	158.5 lb
Ship tons	0.22

References: SNL F-214, TM 9-6111 (M12, M12A2, M12A5), TM 9-6147 (M12A7 series).

TELESCOPE, PANORAMIC: M100 (T149E1) AND M100C (T149E2)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M100		1240-344-4668
M100C		

General

TELESCOPE, PANORAMIC: M100 (T149E1) or M100C (T149E2), is used with MOUNT, TELESCOPE: M99 (T179) or MOUNT, TELESCOPE: M99A1 (T179E4), and is a component of HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, M52 (T98E1), or M52A1 and a component of HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M55 (T108). This panoramic telescope is used for laying the weapon in indirect fire. Panoramic telescope M100C (T149E2) is used with LANDING VEHICLE, TRACKED: howitzer, model 6. The reticle is illuminated by four 6-volt lamps for night operation.

Differences among models

The differences between models are in the reticles and canting mechanism.

Data plate location

The identification plate (nameplate) is on the elbow housing cover.

Classification: Standard A (OTCM 36229).

CHARACTERISTICS

Length	34.75 in.
Width	7.0 in.
Height	10.0 in.
Net weight	85.5 lb
Power	4X
Field of view	10°

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 telescopes per shipping container

Length	3 ft, 8¼ in.
Width	2 ft, 5⅝ in.
Height	1 ft, 1⅝ in.
Volume	10.5 cu ft
Gross weight	166 lb
Ship tons	0.26

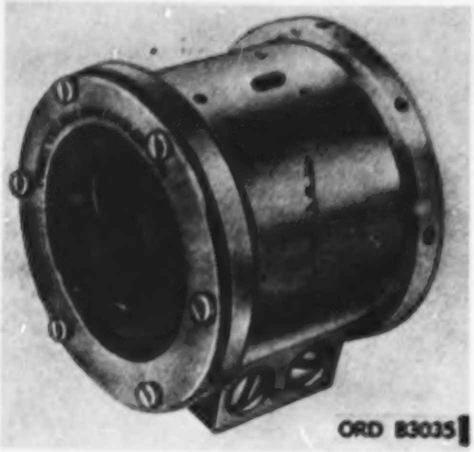
Outside Continental United States

Shipped 2 telescopes per shipping container

Length	3 ft, 8¼ in.
Width	2 ft, 5⅝ in.
Height	1 ft, 1⅝ in.
Volume	10.5 cu ft
Gross weight	166 lb
Ship tons	0.26

References: TM 9-6025, TM 9-1240-219-35P.

MOUNT, TELESCOPE: M110


ORD 83035

Secondary item

Model	*Line item No.*	*Federal stock No.*
M110		1240-788-1234

General

MOUNT, TELESCOPE: M110 mounts TELESCOPE: M108 on RIFLE, 90 MILLIMETER: M67.*

The parts and mechanism are contained in a steel housing. A retaining ring which threads onto the outside of the telescope mount housing holds the mount to the front bracket assembly of the weapon. Four nylon pins in the ring grip the threads on the housing and prevent the rings from loosening.

A cylindrically-shaped flange on a gimbal tube fits snugly into the bore of telescope mount M110. The gimbal tube has three segments of a helical-pitch left-handed thread machined at one end of the internal bore, to engage mating threads on the telescope M108. A conically-shaped shoulder at the other end of the bore of the tube matches the shoulder on the telescope. Telescope mount M110 also features a device which enables bore sight adjustment.

Differences among models

Data plate location

Data are located on the retainer on one end of the mount.

Classification: Standard A (OTCM 37136).

CHARACTERISTICS

Length	1$\frac{11}{16}$ in.
Diameter	2$\frac{3}{16}$ in.
Weight	18 oz

* For characteristics and data, see item in section 4.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1015-223-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

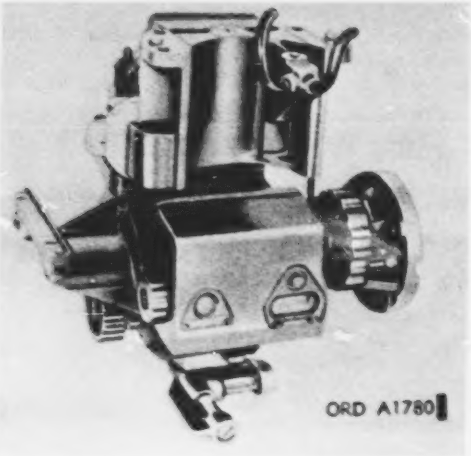
Shipped	per
Length	3⅜ in.
Width	3 in.
Height	2⅝ in.
Volume	0.015 cu ft
Gross weight	1.21 lb
Ship tons	0.008

Outside Continental United States

Shipped	per
Length	3⅜ in.
Width	3 in.
Height	2⅝ in.
Volume	0.015 cu ft
Gross weight	1.21 lb
Ship tons	0.004

References: TM 9-1240-297-35, TM 9-1240-297-35P.

MOUNT, TELESCOPE: M137 (T186E3)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M137 (T186E3)		1240-895-6492

General

MOUNT, TELESCOPE: M137 (T186E3) is used to support the indirect fire TELESCOPE, PANORAMIC: M115 (T146)* on GUN, FIELD ARTILLERY, SELF-PROPELLED: 175-mm, M107 (T235E1)**, and HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 (T236E1)**. It consists of the main housing, main mounting bracket, base assembly, telescope mounting bracket, quadrant seat assembly, clutch, elevation counter, correction counter, cross-level worm gearing; elevation, elevation correction, and cross-level correction knobs; cross-level (cant) and elevation level vials; counter, indicator lamps; lamp bracket fitting, rheostat, rheostat switch knob, electrical wiring and contacts. It incorporates the mechanisms and controls necessary for instrument elevation for cant (cross-level) correction. A mechanical 4-digit decimal counter is used for registering elevation in place of the elevation scale and micrometer used on previous telescope mounts. The correction knob allows correction factors to be incorporated into the elevation counter readings without changing the actual position of the telescope mount. The built-in instrument lighting system derives power from the vehicle's 24-volt system.

Differences among models

Data plate location

The identification plate is located on the mounting bracket.

Classification: Standard A (OTCM 37848).

CHARACTERISTICS

Length	1 ft, 2⅛ in.
Width (with quadrant seat and bolts)	9⅝ in.
Height	1 ft, 1 in.
Weight	38 lb

PERFORMANCE

Movement:	
Elevation	−89 to +1,333 mils
Cross level (cant)	±20 deg
Correction:	
Azimuth	±50 mils
Elevation	±9 mils
Incremental reading (counters)	1 mil

EQUIPMENT

Basic Issue Items: See TM 9-2300-216-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 3 mounts per shipping container

Length	5 ft, ⅝ in.
Width	1 ft, 9¼ in.
Height	1 ft, 5 in.
Volume	12.70 cu ft
Gross weight	203 lb
Ship tons	0.32

Outside Continental United States

Shipped mounts per box

Length	5 ft, ⅝ in.
Width	1 ft, 9¼ in.
Height	1 ft, 5 in.
Volume	12 70 cu ft
Gross weight	203 lb
Ship tons	0.32

References: TM 9-1240-293-34, TM 9-1240-293-35P, TM 9-1240-293-50, TM 9-2300-216-10.

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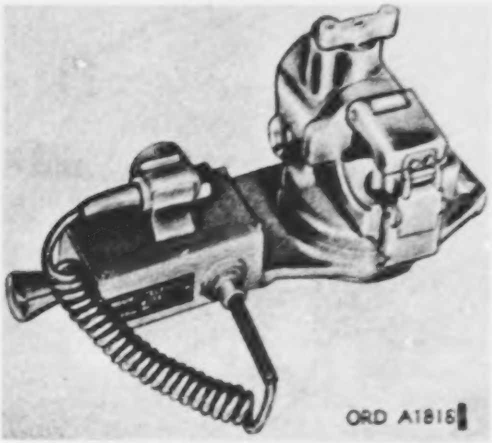
* For characteristics and data, see item on page 14-104.

** For characteristics and data, see item in section 23.

MOUNT, TELESCOPE: M138


ORD A1816

Secondary item

Model	*Line item No.*	*Federal stock No.*
M138		1240-896-2240

General

MOUNT, TELESCOPE: M138 mounts on QUADRANT, FIRE CONTROL: elevation, M15 and holds TELESCOPE, ELBOW: M116 or M116C. The mount is used with GUN, FIELD ARTILLERY, SELF-PROPELLED: full tracked, 155-mm, M107* and HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110.* A lamp attached to a retractile lead provides illumination for the reticle pattern of the elbow telescope.

Differences among models

Data plate location

Data plate is located on left side of main bracket.

Classification: Standard A.

CHARACTERISTICS

Length	9⅝ in.
Width (including allowance for electrical cable)	5¾ in.
Height	4½ in.
Weight	3 lb

PERFORMANCE

* For characteristics and data, see item in section 23.

EQUIPMENT

Basic Issue Items: See TM 9-2300-216-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 40 mounts per shipping container

Length	2 ft, 10¼ in.
Width	2 ft, 3 in.
Height	1 ft, 10½ in.
Volume	12.1 cu ft
Gross weight	197 lb
Ship tons	0.302

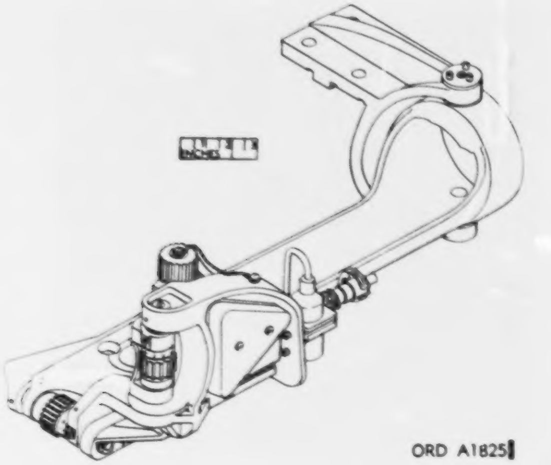
Outside Continental United States

Shipped 40 mounts per shipping container

Length	2 ft, 10¼ in.
Width	2 ft, 3 in.
Height	1 ft, 10½ in.
Volume	12.1 cu ft
Gross weight	197 lb
Ship tons	0.302

References: TM 9-1240-295-35P, TM 9-1240-295-35.

MOUNT, TELESCOPE: M146 (T206)



ORD A1825

Secondary item

Model	*Line item No.*	*Federal stock No.*
M146 (T206)		1240-864-0348

General

MOUNT, TELESCOPE: T206 forms an adjustable base to support TELESCOPE: M118C (T176E2) and M118 (T176E3) right-hand installation on barrel of HOWITZER, MEDIUM, SELF-PROPELLED, FULL-TRACKED, 155-MM: T196E1* and HOWITZER, LIGHT, SELF-PROPELLED, FULL-TRACKED, 105-MM: T195E1*, respectively.

Bore sight knob assemblies are provided to facilitate both ballistic and bore-adjustment control for elevation and azimuth alignment by angularly transporting the entire telescope within the mount. The controls are automatically locked at any desired setting. Adjustable scales calibrated in tenths of a mil simplify corrections required for factors peculiar to the individual weapon and/or its emplacement.

Cant correction is achieved by rotating the entire telescope between the telescope ball supported at the forward end, and the fixed telescope sleeve near the opposite end, and thereby erecting the reticle pattern. A single tapered kingpin secures the telescope in the mount in alternate mating holes and can be removed without the use of tools. A cable assembly is connected between the vehicle power supply and the telescope to illuminate the reticles and level vial.

Differences among models

Data plate location

Data plate is located on the left side of main bracket.

Classification: Standard A.

CHARACTERISTICS

Length	19⅝ in.
Width	6 in.
Height	6⅛ in.
Weight	33 lb

PERFORMANCE

Boresight elevation	±10 mils
Boresight azimuth	±10 mils

EQUIPMENT

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per shipping container

Length	2 ft, 3½ in.
Width	1 ft, 3¾ in.
Height	10¾ in.
Volume	2.68 cu ft
Gross weight	75 lb
Ship tons	0.06

Outside Continental United States

Shipped 1 per shipping container

Length	2 ft, 3½ in.
Width	1 ft, 3¾ in.
Height	10¾ in.
Volume	2.68 cu ft
Gross weight	75 lb
Ship tons	0.06

References: TM 9-1240-275-34, TM 9-1240-275-35P, TM 9-1240-275-50.

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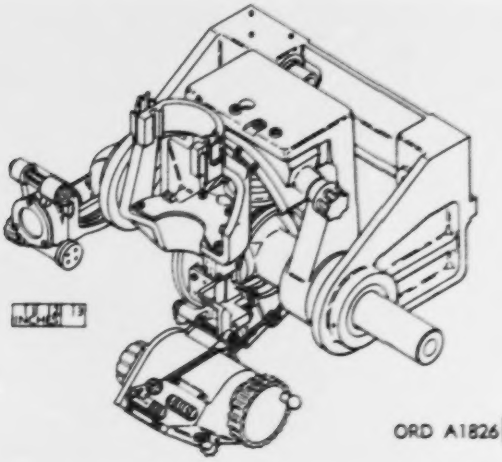
* For characteristics and data, see item in section 23.

MOUNT, TELESCOPE: T208



ORD A1826

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M145 (T208)		1240-871-2969

General

MOUNT, TELESCOPE: M145 (T208), mounts TELESCOPE, PANORAMIC: M117 (T177) used for HOWITZER, LIGHT, SELF-PROPELLED, FULL-TRACKED, 105-mm, T195E1,* and HOWITZER, SELF-PROPELLED, FULL-TRACKED: 155-mm, T196E1.* The mount is attached to a bracket on the trunnion support in the left side of the cab of the vehicle forward of the trunnion. Kept parallel to the weapon by means of a linkage system is the gun bar pivot, the basic reference within the mount, from which elevation and azimuth measurements and adjustments are made. Devices are provided for adjusting the mount in pitch and cross-level to keep the vertical axis of the panoramic telescope plumb. A mil counter aids in the making of elevation adjustments. The counter incorporates a gunner's aid (correction) counter system to simplify correction of elevation values for factors peculiar to the weapon and/or its emplacement. For making fine elevation adjustments with a gunner's quadrant, support assembly, integral with the mount, is provided. Illumination for level vials and counter windows is provided by built-in lighting system. Power is supplied from the 24-volt power source.

Differences among models

Data plate location

Data plate is located on left side of rocker housing.

Classification

CHARACTERISTICS

Length	21 in.
Height	20⅝ in.

PERFORMANCE

Movement, elevation	−50 to ±1,333 mils

EQUIPMENT

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per shipping container

Length	2 ft, 3⅛ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 7⅛ in.
Volume	6.0 cu ft
Gross weight	155 lb
Ship tons	0.15

Outside Continental United States

Shipped 1 per shipping container

Length	2 ft, 3⅛ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 7⅛ in.
Volume	6.0 cu ft
Gross weight	155 lb
Ship tons	0.15

References: TM 9-1240-273-34, TM 9-1240-273-35P, TM 9-1240-273-50.

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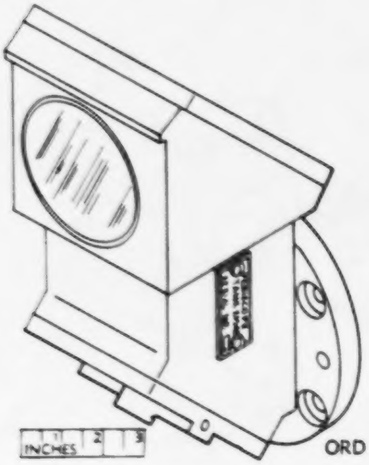
* For characteristics and data, see item in section 23.

PERISCOPE, TANK: M42 (XM42)



ORD A1827

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M42 (XM42)		1240-964-2933

General

PERISCOPE, TANK: M42 (XM42) is used on the HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, T196E1.*

The periscope is located on the center rotor and serves to deviate the line of sight to provide an unobstructed field of vision past the muzzle brake.

Differences among models

Data plate location

The identification plate is located on the right side of the periscope.

Classification

CHARACTERISTICS

Height	10¾ in.
Width	5 in.
Depth	5½ in.
Weight	8 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per shipping container

Length	1 ft, ¼ in.
Width	8¾ in.
Height	6½ in.
Volume	0.381 cu ft
Gross weight	9.95 lb
Ship tons	0.009

Outside Continental United States

Shipped 1 per shipping container

Length	1 ft, ¼ in.
Width	8¾ in.
Height	6½ in.
Volume	0.381 cu ft
Gross weight	9.95 lb
Ship tons	0.009

References:

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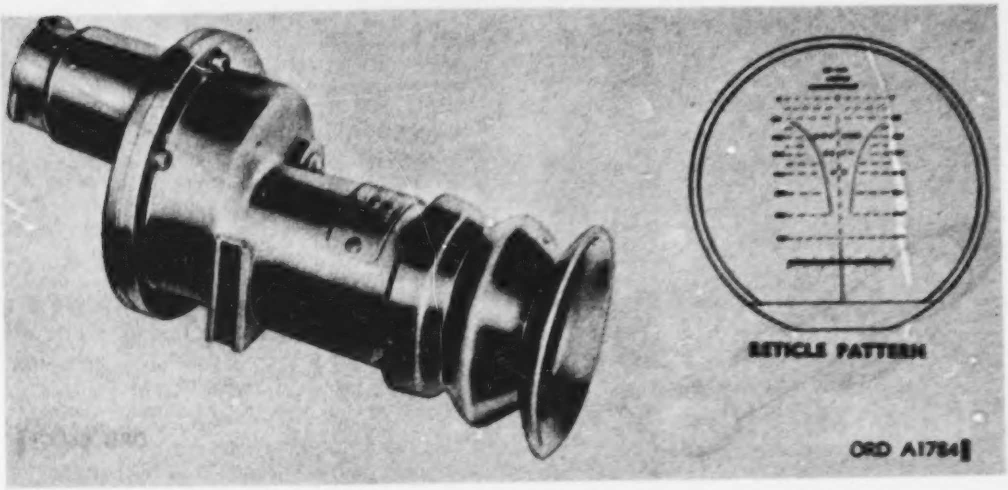
* For characteristics and data, see item in section 22.

TELESCOPE: M103



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M103		1240-788-1236

General

TELESCOPE: M103 is used with MOUNT, TELESCOPE: M110* on RIFLE, 90 MILLIMETER: M67.**

The telescope is a lightweight hermetically-sealed, 3-power, fixed-focus optical instrument equipped with a ballistic-type reticle. A clamp and bracket assembly is provided to mount LIGHT, INSTRUMENT: ORD No. 8246214 to the front bracket assembly of the rifle.

Differences among models

Data plate location

An identification plate is located on the housing near the eyepiece.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Length	6¾ in.
Diameter	2⅝ in.
Weight	15 oz
Magnification	3 power
Diameter of exit pupil	0.250
Field of view	10 deg
Eyepiece focus fixed at	−1 diopter
Equivalent focal length of objective	3.601 in.
Equivalent focal length of eyepiece	1.202 in.

* For characteristics and data, see item in section 14.

** For characteristics and data, see item in section 4.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1015-223-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

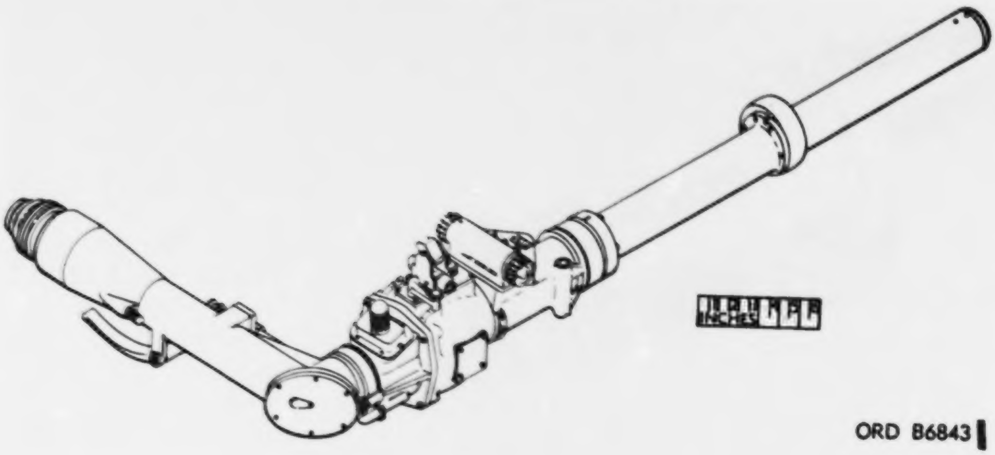
Shipped	
Length	7¾ in.
Width	5 in.
Height	4⅝ in.
Volume	0.99 cu ft
Gross weight	1.85 lb
Ship tons	0.002

Outside Continental United States

Shipped	
Length	7¾ in.
Width	5 in.
Height	4⅝ in.
Volume	0.099 cu ft
Gross weight	1.85 lb
Ship tons	0.002

References: TM 9-1240-259-35, TM 9-1240-259-35P.

TELESCOPE: M118 (T176E3) AND M118C (T176E2)



ORD B6843

Secondary Item

Model	Line item No.	Federal stock No.
M118 (T176E3)		1240-819-4519
M118C (T176E2)		1240-819-4520

General

TELESCOPE: M118 (T176E3) or M118C (T176E2) is used for positioning HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, T196E1* or HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, T195E1,* respectively, on targets visible from the weapon. The telescope is mounted in MOUNT, TELESCOPE: M146 (T206).* The telescope is a fixed focus instrument. It contains two precollimated ballistic reticles that can be selectively placed in the field of view.

Controls for laying the howitzer on "line of sight" targets are the same as those utilized for indirect fire, since the telescope and mounts are bolted to the howitzer mount. Correction for cant is achieved by rotating the telescope within its mounts, and thereby erecting the reticles with the aid of an illuminated crosslevel.

Differences among models

The difference between the M118 (T176E3) and M118C (T176E2) is in the reticle.

Data plate location

Plate is located on top of the worm assembly of the telescope.

Classification:

M118 (T176E3)	Standard A
M118C (T176E2)	Standard A

CHARACTERISTICS

Length	3 ft, 2½ in.
Width (including eyepiece arm)	1 ft, 6½ in.
Height	8¼ in.
Weight	44 lb
Magnification	4 power
Field of view	10 deg
Exit pupil diameter	0.236 in.
Effective focal length:	
Objective	7.087 in.
Eyepiece	1.771 in.

PERFORMANCE

Axial cant correction	±5 deg
Mirror, level (detents at 40 deg and 50 deg right and left)	100 deg
Eyepiece arm operative range 1	±20 deg

EQUIPMENT

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 per shipping container

Length	4 ft, ¼ in.
Width	2 ft, ⅛ in.
Height	1 ft, 11 in.
Volume	16.2 cu ft
Gross weight	205 lb
Ship tons	0.4

Outside Continental United States

Shipped 2 per shipping container

Length	4 ft, ¼ in.
Width	2 ft, ⅛ in.
Height	1 ft, 11¼ in.
Volume	16.2 cu ft
Gross weight	205 lb
Ship tons	0.4

References: TM 9-1240-276-34, TM 9-1240-276-35P, TM 9-1240-276-50.

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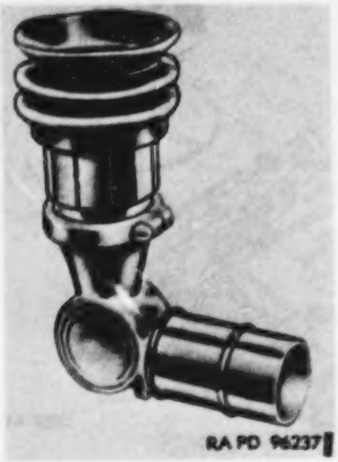
* For characteristics and data, see item in section 23 and on page 14-98.

TELESCOPE, ELBOW: M116 AND M116C



RA PD 96237

Secondary item

Model	*Line item No.*	*Federal stock No.*
M116		1240-898-6787
M116C		1240-898-6789

General

TELESCOPE, ELBOW: M116 or M116C, is a simple, fixed focus, 3-power instrument. It is used in direct firing of the weapon. Illuminated reticle patterns are incorporated into the optical system of the telescope.

Telescope M116 is used with HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110.* Telescope M116C is used with GUN, FIELD ARTILLERY, SELF-PROPELLED: 175-mm, M107.*

Differences among models

The differences between M116 and M116C are in the reticles.

Data plate location

Plate is located on left side of the elbow.

Classification: Standard A.

CHARACTERISTICS

Length	5⅝ in.
Width	1¼ in.
Height	2⅞ in.
Weight	2.35 lb.
Magnification	3X
Field of view	13 deg. 20 min

* For characteristics and data, see item in section 23.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2300-216-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 48 telescopes per shipping container

Length	2 ft, 4⅝ in.
Width	1 ft, 6 in.
Height	1 ft, 3 in.
Volume	4.5 cu ft
Gross weight	179.75 lb
Ship tons	0.112

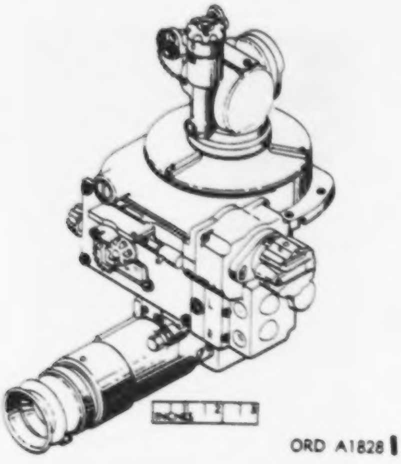
Outside Continental United States

Shipped 48 telescopes per shipping container

Length	2 ft, 4⅝ in.
Width	1 ft, 6 in.
Height	1 ft, 3 in.
Volume	4.5 cu ft
Gross weight	179.75 lb
Ship tons	0.112

References: TM 9-1240-288-35P, TM 9-1240-288-35.

TELESCOPE, PANORAMIC: M115 (T146)



ORD A1828

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M115 (T146)		1240-895-9186

General

TELESCOPE, PANORAMIC: M115 (T146) is used with MOUNT, TELESCOPE: M137 (T186E3)* for indirect fire, in self-propelled weapon fire control systems of GUN, FIELD ARTILLERY, SELF-PROPELLED: 175-mm, M107 (T235E1),** and HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 (T236E1).** It is a 4-power, fixed-focus telescope, with a 10-degree field of view. It maintains an upright image regardless of whether the line of sight is directed, forward, to the side, or to the rear of the observer. A 90-degree prism is rotated with the head of the telescope through a complete azimuth circle of 6,400 mils. The prism may also be elevated and depressed through angles of 300 mils from the horizontal. The telescope has an azimuth mil counter mechanism in place of azimuth scales. The counter registers azimuth travel in quarter-mil units. The horizontal eyepiece segment of the elbow assembly is extended so that a helmeted soldier is able to sight without interference from the counter assembly. The azimuth worm, used to rotate the head, contains only one knob, pinned on the right end of the worm shaft. The worm has no throwout provision for disengaging it from the worm wheel. Instead, the azimuth knob has a folding crank which may be swung out in an arc of 180 degrees for rapid turning of the rotating head. In the closed position, the crank does not interfere with normal use of the knob. The reticle is illuminated by light entering a red glass window or by a reticle lamp. The horizontal centerline of the reticle is graduated into 5-mil increments. The surfaces of all optical elements except the reticle are coated to minimize reflections and to increase light transmission.

Differences among models

Data plate location

The data plate is located on the rotating head.

Classification: Standard A.

CHARACTERISTICS

Length	9½ in.
Width	8¼ in.
Height	11 in.
Weight	8 lb
Magnification	4X
Field of view	10 deg
Diameter of exit pupil	0.165 in.

PERFORMANCE

Movement:	
Azimuth	6,400 mils
Elevation	±300 mils
Incremental reading (counters)	¼ mil

EQUIPMENT

Basic Issue Items: See TM 9-2300-216-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 8 telescopes per shipping container

Length	3 ft, 3½ in.
Width	2 ft, 6 in.
Height	2 ft, 2½ in.
Volume	15.05 cu ft
Gross weight	199 lb
Ship tons	0.37

Outside Continental United States

Shipped telescopes per box

Length	3 ft, 3½ in.
Width	2 ft, 6 in.
Height	2 ft, 2½ in.
Volume	15.05 cu ft
Gross weight	199 lb
Ship tons	0.37

References: TM 9-1240-292-35P, TM 9-2300-216-10, TM 9-1240-292-34.

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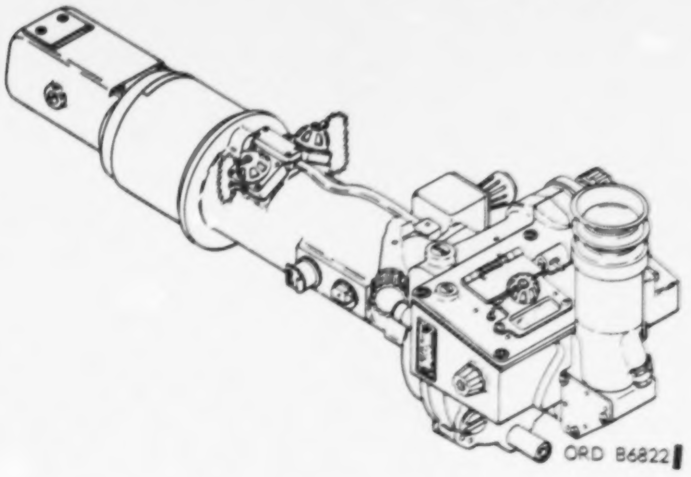
* For characteristics and data, see item on page 14-96.
** For characteristics and data, see item in section 23.

TELESCOPE, PANORAMIC: M117 (T177)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M117 (T177)		1240-864-2930

General

TELESCOPE, PANORAMIC: M117 (T177), is mounted directly on MOUNT, TELESCOPE: M145 (T208), with latches. It is used for HOWITZER, LIGHT, SELF-PROPELLED, FULL-TRACKED: 105-mm, T195E1* and HOWITZER, MEDIUM, SELF-PROPELLED, FULL-TRACKED: 155-mm, T196E1.*

M117 is the basic instrument used in laying the weapon in azimuth for indirect fire. It is equipped with mechanical counter devices rather than the customary circular azimuth scales and a gunner's aid counter is integral with the instrument. The gunner's aid counter mechanism, which permits azimuth corrections for factors peculiar to the individual weapon and its emplacement, to be entered easily into the instruments, is an integral part of the counter mechanism.

Differences among models

Data plate location

Plate is located on the left side lower housing.

Classification: Standard A.

CHARACTERISTICS

Length	1 ft, 8⅛ in.
Width	7⅞ in.
Height	7 in.
Weight	14.46 lb
Magnification	4 power
Field of view	10 deg

* For characteristics and data, see item in section 28.

PERFORMANCE

Azimuth	6,400 mils
Elevation	±300 mils
Increment reading (counters)	⅛ mil

EQUIPMENT

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per shipping container

Length	2 ft, 4 in.
Width	1 ft, 1⅝ in.
Height	1 ft, 1 in.
Volume	2.96 cu ft
Gross weight	23.50 lb
Ship tons	0.07

Outside Continental United States

Shipped 1 per shipping container

Length	2 ft, 4 in.
Width	1 ft, 1⅝ in.
Height	1 ft, 1 in.
Volume	2.96 cu ft
Gross weight	23.50 lb
Ship tons	0.07

References: TM 9-1240-274-34, TM 9-1240-274-35P, TM 9-1240-274-50.

SECTION 15

FIRE-CONTROL DESIGNATING AND INDICATING EQUIPMENT

(CLASS 1260)

(Includes gunnery officer's console and azimuth indicators)

Page

CONSOLE, GUNNERY OFFICERS: M1
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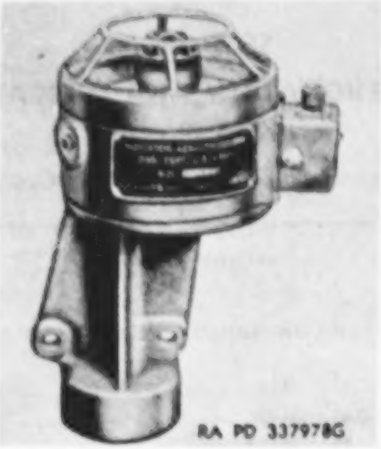
INDICATOR, AZIMUTH, MECHANICAL: M19 15-3
INDICATOR, AZIMUTH, MECHANICAL: M21 15-4

INDICATOR, AZIMUTH, MECHANICAL: M18


RA PD 337978G

Model	*Line item No.*	*Federal stock No.*
M18		

General

INDICATOR, AZIMUTH, MECHANICAL: M18, is used in tanks to lay off horizontal angles when laying the gun for indirect fire. It consists of a mounting bracket and gear housing, together with the necessary gears, dials, and pointers, arranged so that the tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given aiming point. A third, nonadjustable pointer, indicates the position of the gun in relation to the longitudinal axis of the vehicle. Indirect lighting of the dials is provided by lighting system M21. A switch assembly, located on the side of the gear housing, controls the lamps. The pointers are tipped with luminous paint.

Differences among models

Data plate location

The identification plate is located on the side of the gear housing.

Classification:

CHARACTERISTICS

Dial graduations:
  100-mil .... 0–3,200–0–3,200 mils
  1-mil .... 0–100 mils
Numbers of pointers 3
Height ....
Diameter ....
Weight ....

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

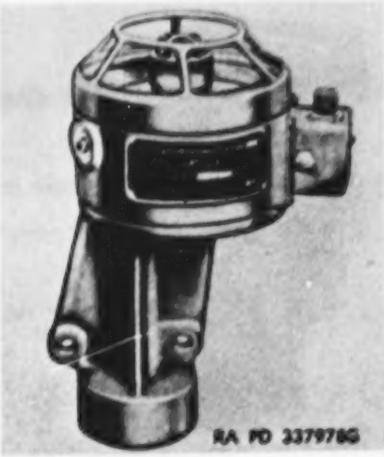
Shipped   azimuth indicator per box.
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped   azimuth indicator per box.
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Reference: TM 9–1781D.

INDICATOR, AZIMUTH, MECHANICAL: M19


RA PD 337978G

Model	*Line item No.*	*Federal stock No.*
M19		

General

INDICATOR, AZIMUTH, MECHANICAL: M19, is used in tanks to lay off horizontal angles when laying the gun for indirect fire. It consists of a mounting bracket and gear housing, together with the necessary gears, dials and pointers, arranged so that the tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given aiming point. A third, nonadjustable pointer, indicates the position of the gun in relation to the longitudinal axis of the vehicle. Indirect lighting of the dials is provided by lighting system M21. A switch assembly, located on the side of the gear housing, controls the lamps. The pointers are tipped with luminous paint.

Differences among models

Data plate location

The identification plate is located on the side of the gear housing.

Classification:

CHARACTERISTICS

Dial graduations:
  100-mil .... 0–6,400 mils
  1-mil .... 0–100 mils
Number of pointers 3
Height ....
Diameter ....
Weight ....

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

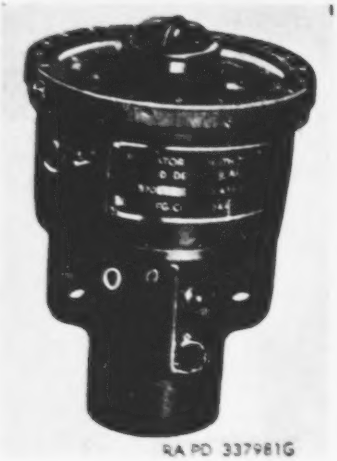
Shipped   azimuth indicator per box.
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped   azimuth indicator per box.
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Reference: TM 9-1731D.

INDICATOR, AZIMUTH, MECHANICAL: M21



RA PD 337981G

Secondary item

Model	*Line item No.*	*Federal stock No.*
M21		1260–705–2201

General

INDICATOR, AZIMUTH, MECHANICAL: M21, is used in tanks to lay off horizontal angles when laying the gun for indirect fire. It consists of a mounting bracket and gear housing, together with the necessary gears, dials, and pointers, arranged so that the tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given aiming point. A gunner's aid dial (third scale), and dust and moisture seals are provided. Indirect lighting of the dials is provided by lighting system M21. A switch, located on top of the battery case, controls the lamps. The pointers are tipped with luminous paint.

Differences among models

Data plate location

The identification plate is located on the side of the gear housing.

Classification:

CHARACTERISTICS

Dial graduations:

100-mil	0–3,200–0–3,200 mils
1-mil	0–100 mils
Gunner's aid dial (1-mil)	0–50 mils R&L
Number of pointers	3

Height:

Overall	9½ in.
Mounting bracket	4½ in.
Diameter	7 in.
Weight	19 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped azimuth indicator per box.

Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped azimuth indicator per box.

Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F–889, sections 1 and C1; TM 9–1781D

SECTION 16

FIRE CONTROL TRANSMITTING AND RECEIVING EQUIPMENT, EXCEPT AIRBORNE

(CLASS 1265)

(For additional superelevation transmitters, see section 17)

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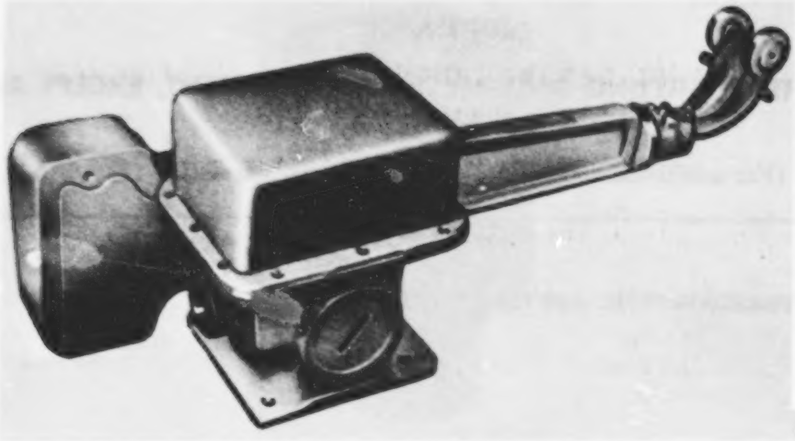
TRANSMITTER, SUPERELEVATION: M23 (T14)



ORD A1298

Secondary item

Model	*Line item No.*	*Federal stock No.*
M23		1265-622-4872

General

TRANSMITTER, SUPERELEVATION: M23 (T14), is used with TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1. The transmitter is electrically and mechanically operated. The transmitter housing is mounted to a bracket that is fastened to the turret ring. The transmitter arm is cam operated and pivots on a shaft through a limited arc whenever the 120-mm gun is depressed or elevated at any azimuth. The transmitter electrical system is connected to the ballistic computer and the elevation servo mechanism. Movement of the transmitter arm causes the two synchro motors, contained in the transmitter, to turn and supply a signal to the ballistic computer which subtracts the superelevation signal from the elevation signal. The resultant output is transmitted electrically to the elevation servo mechanism, which in turn positions the range finder.

Differences among models

Data plate location

The identification plate (nameplate) is located on the arm of the transmitter.

Classification: Standard A (OTCM 36540).

CHARACTERISTICS

Length	1 ft, 5 in.
Width	5⅝ in.
Height	7⅝ in.
Weight	43 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped transmitters per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped transmitters per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-1265-200-35, TM 9-1265-200-35P.

SECTION 17

FIRE CONTROL RADAR EQUIPMENT, EXCEPT AIRBORNE

(CLASS 1285)

COMPUTER, BALLISTICS: M10 (T27E2)
For data and characteristics, see FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38, section 13.

TRACKER, RADAR: M4 (T9)
For data and characteristics, see FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38, section 13.

SELECTOR, TARGET: M5 (T1E2)
For data and characteristics, see FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M38, section 13.

SECTION 18

MISCELLANEOUS FIRE CONTROL EQUIPMENT

(CLASS 1290)

(Includes aiming circles, aiming posts, antiaircraft gun, local and remote control systems, ballistic drives, fire control quadrants, fuze amplifier and motor drive, fuze setters, mechanical azimuth indicator, remote control systems, sight mount and front sight, superelevation transmitter, and telescope, periscope and quadrant mounts)

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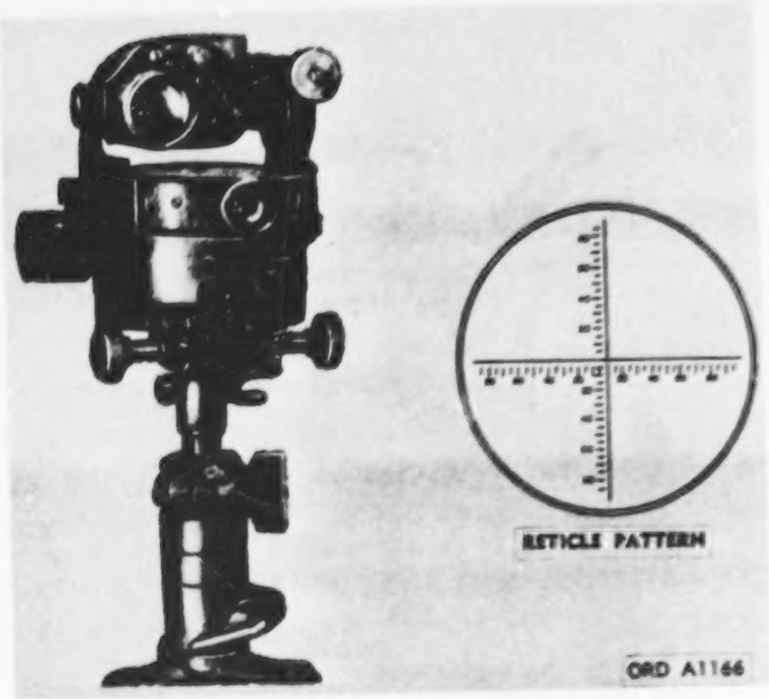
AIMING CIRCLE: M1



Model	*Major item Line item No.*	*Federal stock No.*
M1, w/e	4 08180 10	1290 671 6145

General

AIMING CIRCLE: M1, is used in measuring angles in azimuth and elevation, and for general topographic work. The reticle scale provides the only means for measuring vertical angles and is also used for determining small horizontal angles. Usually, the azimuths are measured on the azimuth scale. A magnetic needle provides initial orienting direction for the instrument. The needle is observed through a magnifier and is centered between the lines in a magnetic needle reticle. The line of sight can be elevated or depressed 8° above or below the normal. The reticle and scales of the aiming circle are illuminated for night operation by an instrument light.

Differences among models

Data plate location

Classification: Standard C (OTCM 37566).

CHARACTERISTICS

Magnification	4 power
Reticle elevation scale	85-0-85 mils
Reticle azimuth scale	85-0-85 mils
Field of view	10°
Elevation (max) of telescope	8°
Depression (max) of telescope	8°
Azimuth scales	0 to 6,400 mils 0 to 3,200 mils, 0 to 3,200 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1290-201-12P.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 aiming circles (w equipment) per box.

Length	3 ft, 4 in.
Width	1 ft, 4 in.
Height	10 in.
Volume	4.4 cu ft
Gross weight	62 lb
Ship tons	0.12

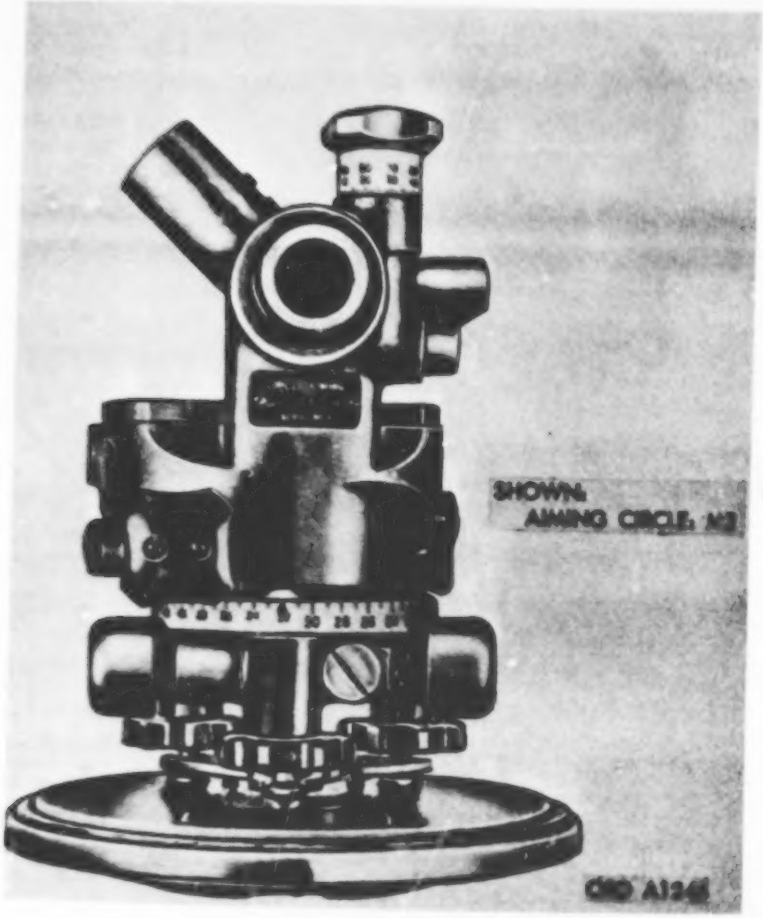
Outside Continental United States

Shipped aiming circles (w equipment) per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-160, TM 9-375, TM 9-1330, TM 9-1290-201-12P.

*AIMING CIRCLE: M2 (T3)



Model	*Major item Line item No.*	*Federal stock No.*
M2 (T3) w/e	6-00118-18	1290-614-0008

General

AIMING CIRCLE: M2 is used to measure the azimuth and elevation bearing angles of a ground or aerial target with respect to a preselected base line. The aiming circle has many of the characteristics of a surveyor's transit. Basically, it consists of a telescope mounted on a mechanism which permits unlimited azimuth and limited elevation movements. By rotating two orientating knobs, zero azimuth heading with respect to magnetic north or any other selected compass heading can be established. The azimuth orienting control knobs can be disengaged for rapid movement by exerting an outward pressure on the knobs. The mechanisms are spring-loaded and will reengage when outward pressure is removed. A locking device secures the compass after the orienting adjustment has been made.

Differences among models

Data plate location

The identification plate is located on the side of the housing.

Classification:

M2	Standard A (AMCTC item 2187)

CHARACTERISTICS

Weight of aiming circle:

w/cover	9 lb
w/equipment	21 lb
Azimuth rotation	unlimited
Elevation (max)	800 mils
Depression (max)	400 mils
Magnification of telescope	4 power
Field of view	10°

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1290-262-12P.

INSTRUCTIONAL MATERIAL

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*Previously listed model M2A1 was obsoleted by AMCTC item 2187.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 aiming circle (w/equipment) per shipping container

Length	3 ft, 3 in.
Width	1 ft, 4½ in.
Height	9⅝ in.
Volume	3.61 cu ft
Gross weight	65 lb
Ship tons	0.09

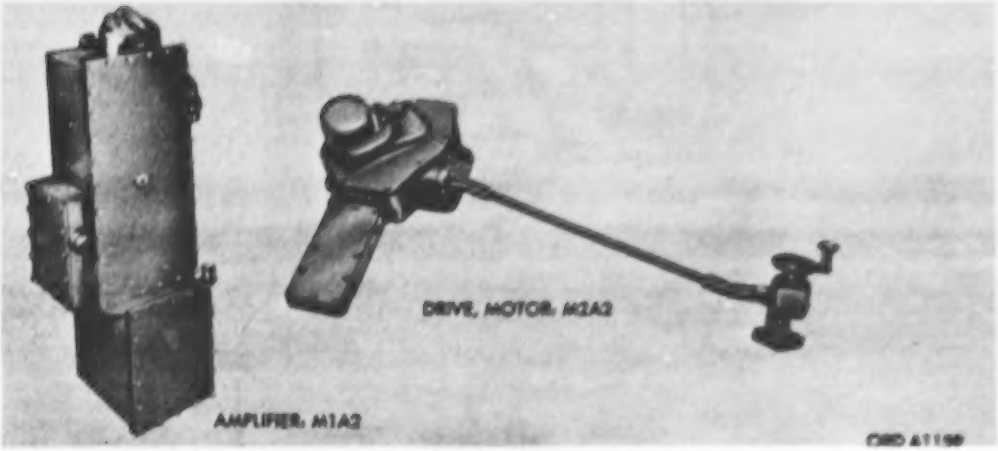
Outside Continental United States

Shipped 1 aiming circle (w/equipment) per shipping container

Length	3 ft, 3 in.
Width	1 ft, 4½ in.
Height	9⅝ in.
Volume	3.61 cu ft
Gross weight	65 lb
Ship tons	0.09

References: TM 9-6166, TM 9-1290-262-12P, TM 9-1290-262-35P, TM 9-1290-262-35.

AMPLIFIER: M1A2 AND DRIVE, MOTOR: M2A2



Model	*Secondary item Line item No.*	*Federal stock No.*
M1A2		1290-335-5047
M2A2		1290-335-5045

General

AMPLIFIER: M1A2 and DRIVE, MOTOR: M2A2, together comprise the standard servo mechanism, which is used to control the combination fuze setter-rammer M20, which sets mechanical time fuzes on rounds of ammunition that it rams into 90-mm guns M2, M2A1, and M2A2 on antiaircraft gun mount M2A1. The amplifier and the motor drive provide both automatic and manual means for control of the fuze setter-rammer. For automatic control, the amplifier and motor drive function as part of the closed-looped servo system that keeps the input data shaft of the fuze setter-rammer continuously positioned at the proper value of fuze number. For manual control, the input data shaft is positioned by means of a handwheel assembly. A lagmeter on the amplifier indicates any error in the fuze setting, and the handwheel is rotated accordingly.

Differences among models

Data plate location

Classification

Amplifier: M1A2 ....
Standard B (OTCM 36841) ....
Drive, motor: M2A2 .... Standard A

CHARACTERISTICS

Amplifier M1A2:
Weight .... 148 lb
Height .... 3 ft. $2\frac{5}{8}$ in.
Width .... 1 ft. $1\frac{15}{16}$ in.
Depth .... $10\frac{1}{2}$ in.
Gain of preamplifier w/input from 0.05 to 0.10 volts ... (approx 200)
Output voltage limit 50
Grid signal voltage for current cutoff 50
Voltage across detector filler circuits .... 100 ± 25
Oil chamber transformer voltages:
Amplifier power supply tube .... 880 v
Heater filaments .... 5 v
Heater filaments, electronic amplifier tubes .... 6.3 v
Motor drive M2A2:
Weight .... 170 lb
Height .... 2 ft. $\frac{5}{8}$ in.
Width .... 1 ft. $5\frac{5}{16}$ in.
Depth .... $6\frac{9}{16}$ in.
Gearing ratio:
Between motor and output shaft 10:1
Between worm and worm gear 100:1
Between motor and rotor 1000:1

Transformer, synchronous, 1-phase, 90-volt, 60-cycles
Motor speed range .... 0 to 6,000 rpm
Fuze setting indicator calibration .... 0 to 30 sec
Motor .... 50v dc
Transient voltage .... (approx) to 1,000 v

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL D-16.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Amplifier M1A2:

Within Continental United States

Shipped amplifiers per box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped amplifiers per box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Motor drive M2A2:

Within Continental United States

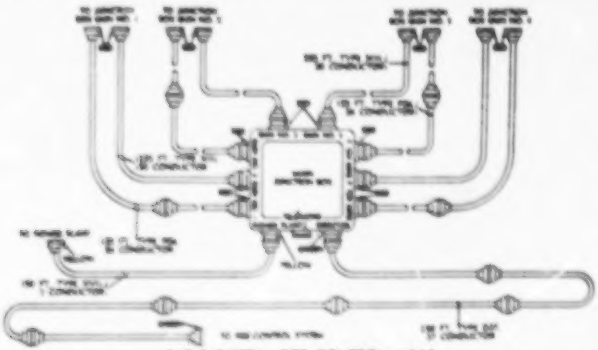
Shipped motor drives per box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

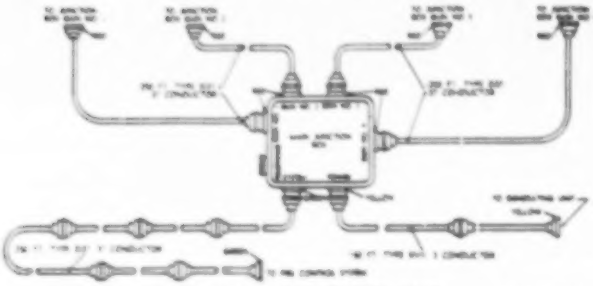
Shipped motor drives per box.
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-274, TM 9-6003.

CABLE SYSTEM, FIRE CONTROL: M1A1 AND M1A2



CABLE SYSTEM, FIRE CONTROL: M1A1



CABLE SYSTEM, FIRE CONTROL: M1A2 ORD A1616

	Major item	
Model	*Line item No.*	*Federal stock No.*
M1A1	6-43186-01	1290-333-8012
M1A2	6-43186-08	1290-611-7727

General

CABLE SYSTEM, FIRE CONTROL: M1A1 and M1A2, is used with MOUNT, GUN: 90-mm, M2A1 and MOUNT, GUN: 90-mm, M1A2, respectively. The cable system is used to transmit power from the generating unit and data signals from FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C or M33B1C to the gun mount. The cable system serves a battery of four guns or less.

The M1A1 cable system consists of a main junction box, one 3-conductor cable assembly, four 19-conductor cable assemblies, eight 26-conductor cable assemblies, and six 37-conductor cable assemblies. The M1A2 cable system consists of a main junction box, two 3-conductor cable assemblies, and ten 37-conductor cable assemblies.

The 3-conductor cable assembly is equipped with a 3-pole receptacle and plug. The 19-conductor cable assemblies are equipped with 19-pole receptacles and plugs. The 26-conductor cable assemblies are equipped with 26-pole receptacles and plugs, and the 37-conductor cable assemblies are equipped with 38-pole receptacles and plugs.

Differences among models

The main junction box of the M1A1 cable system is square and has 1 male and 16 female receptacles. The main junction box of the M1A2 cable system is rectangular and has 1 male and 4 female receptacles.

Data plate location

The data are located on the cover of the main junction box.

Classification:

M1A1	Standard B (OTCM 36841)
M1A2	Standard B

CHARACTERISTICS

CABLE SYSTEM, FIRE CONTROL: M1A1

Number of cables:

3-conductor	2
19-conductor	4
26-conductor	8
37-conductor	6

Length of cables:

3-conductor	150 ft
19-conductor	225 ft
26-conductor	125 ft
37-conductor	250 ft

CABLE SYSTEM, FIRE CONTROL: M1A2

Number of cables:

3-conductor	1
37-conductor	10

Length of cables:

3-conductor	150 ft
37-conductor	250 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped cable systems per.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

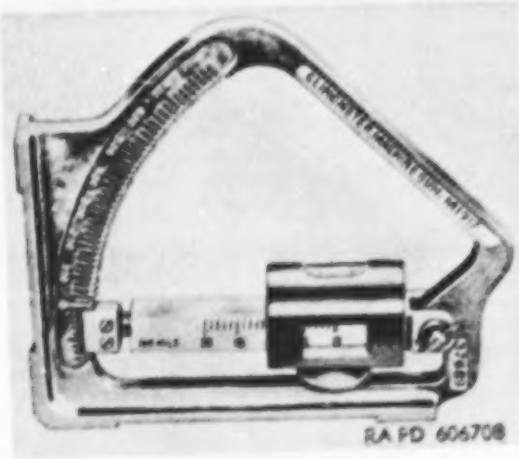
Outside Continental United States

Shipped cable systems per.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-307, Vol. 1 (M1A1); SNL F-244 (M1A2); TM 9-649.

CLINOMETER, MACHINEGUN, M1917



RA PD 606708

Secondary item

Model	*Line item No.*	*Federal stock No.*
M1917		1290-757-0979

General

The CLINOMETER, MACHINEGUN, M1917 is a leveling instrument used when elevating or depressing the weapon to measure the elevation or depression angle. These instruments are serial numbered from 33,459 to 61,050. All others having serial numbers above or below these numbers have been disposed of. The clinometer is used in the same capacity for the machinegun as the gunner's quadrant is used for the artillery weapons. However, the clinometer differs from the gunner's quadrant in that its coarse and fine scales are graduated in 20-mil and 1-mil intervals respectively, compared to the 10-mil and 0.2-mil intervals of the gunner's quadrant. Also, the scale readings of the clinometer are identical when viewed from either side of the instrument.

Differences among models

Data plate location

Data are located on the frame of the clinometer.

Classification: Standard A (OTCM 36541).

CHARACTERISTICS

Graduations of instrument (20— mil steps)	−160 to +840 mil
Graduations of leveling arm (1— mil intervals)	0 to +20 mil
Limits of operation:	
Elevation	+840 mil
Depression	−160 mil

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped clinometers per

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped clinometers per

Length

Width

Height

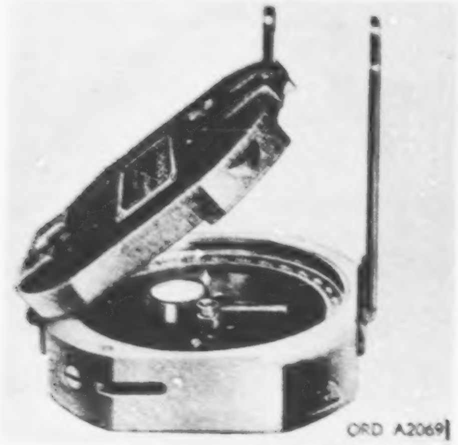
Volume

Gross weight

Ship tons

References: SNL F-13, TM 9-875, TM 9-1327.

COMPASS, MAGNETIC, UNMOUNTED: M2, W/E



ORD A2069

Major item

Model	*Line item No.*	*Federal stock No.*
M2, w/e	4-10625-05	1290-335-4972

General

COMPASS, MAGNETIC, UNMOUNTED: M2, w/e, is a multiple purpose instrument applicable to obtaining clinometer, angle of site, and azimuth readings. The body of the compass is dustproof and moisture proof, and is made of nonmagnetic material except for the magnetic needle and its pivot. When the cover is closed, the magnetic needle is automatically lifted from its pivot to protect the pivot point and jewel bearing. The jewel bearing is agate. The compass is provided with an angle of site scale and an azimuth scale. The azimuth scale may be rotated approximately 1,600 mils. The compass is equipped with circular and tubular levels.

The compass employs front and rear leaf sights in conjunction with a mirror in the cover for sighting and reading the angles. This instrument has an azimuth scale adjuster for orienting the azimuth scale to the local magnetic declination, so that grid or Y azimuths may be read direct.

Differences among models

Data plate location

Plate is located on cover.

Classification: Standard A (OTCM 36541).

CHARACTERISTICS

Angle of site scale	1,200-0-1,200 mils
Azimuth scale	0 to 6,400 mils
Dimensions closed	2¾ in. x 1⅛ in.
Weight	8 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6605-200-12P.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 100 compasses (w/equipment) per shipping container

Length	2 ft, ¼ in.
Width	1 ft, 6¼ in.
Height	1 ft, 3 in.
Volume	3.8 cu ft
Gross weight	125 lb
Ship tons	0.10

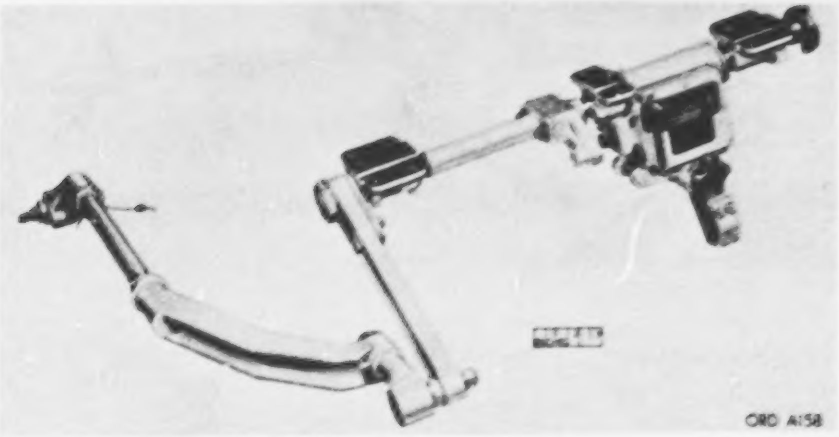
Outside Continental United States

Shipped 100 compasses (w/equipment) per shipping container

Length	2 ft, ¼ in.
Width	1 ft, 6¼ in.
Height	1 ft, 3 in.
Volume	3.8 cu ft
Gross weight	125 lb
Ship tons	0.10

References: SNL F-219, TM 9-575, TM 9-1580, TM 9-6605-200-12P.

DRIVE, BALLISTICS: M3 (T23E1)


ORD A158

Secondary item

Model	*Line item No.*	*Federal stock No.*
M3 (T23E1)		1290-764-9131

General

DRIVE, BALLISTICS: M3 (T23E1), is a differential mechanical device which receives angular motion from a parallelogram linkage attached to a gun trunnion. It receives superelevation data from a ballistic computer and transmits the angular value received from the position of the gun, plus superelevation data to a gunner's periscope, thereby compensating for the ballistics of the projectile. It also provides synchronization to the range finder. The length of the offset connector to gun linkage is adjustable to provide synchronized movement of all instruments and the gun. A level vial is provided for initial alinement at zero elevation. A lamp assembly allows for use of the 24-volt vehicle power source or power from LIGHT INSTRUMENT: M30. A range knob rotates the range scales displacing the sights the proper distance.

The ballistic drive M3 (T23E1) is used with the TANK, COMBAT, FULL TRACKED: 90-mm gun, M47.

Differences among models

Data plate location

Plate is located on left side of ballistics box.

Classification: Standard A.

CHARACTERISTICS

Length	2 ft, 9½ in.
Width	1 ft, 10 in.
Height	2 ft, 5⅝ in.
Weight	40 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-262.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 3 ballistic drives per shipping container

Length	2 ft, 9 in.
Width	1 ft, 8⅝ in.
Height	1 ft, 7½ in.
Volume	7.725 cu ft
Gross weight	196 lb
Ship tons	0.19

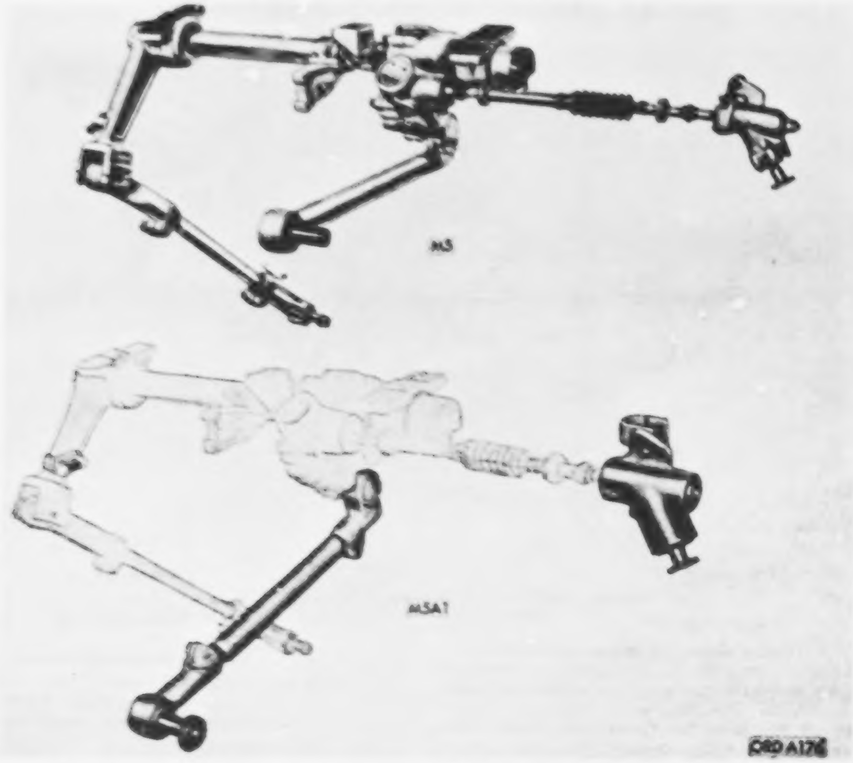
Outside Continental United States

Shipped 3 ballistic drives per shipping container

Length	2 ft, 9 in.
Width	1 ft, 8⅝ in.
Height	1 ft, 7½ in.
Volume	7.725 cu ft
Gross weight	196 lb
Ship tons	0.19

References: SNL F-339, Section 1; TM 9-6065.

DRIVE, BALLISTICS: M5 (T24E2) AND M5A1 (T24E5)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M5 (T24E2)		1220-844-4687
M5A1 (T24E5)		1290-564-7392

General

DRIVE, BALLISTIC: M5 (T24E2) or M5A1 (T24E5), consists of a superelevation box assembly, ballistic drive link assembly, trunnion link assembly, junction box assembly, level vial, light assembly, and linkage that connects the ballistics unit to the gun and the head assembly of PERISCOPE: M20 (T35) or M20A1; RANGE FINDER, FIRE CONTROL: M13 (T46E1) or M13A1 (T46E4); and COMPUTER, BALLISTICS: M12 (T30) or M13 (T31). Superelevation motion from the ballistics computer is introduced into the ballistics drive through the computer output shaft, depressing the line of sight of the periscope and range finder. The ballistic drive M5 (T24E2) is mounted to the turret roof by two supports and by a flange on the junction box and is located in front of the range finder M13.

The ballistic drive M5A1 (T24E5) is mounted to the turret roof by two supports and by a flange on the junction box and is located in front of the range finder M13A1 (T46E4).

The ballistic drive M5 (T24E2) is a component of the fire control system of TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A1, and M48C. The ballistic drive M5A1 is a component of the fire control system of TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2.

Differences among models

The ballistic drive M5A1 differs from M5 by a longer and modified ballistic drive link assembly, modified junction box assembly, and has the level vial on opposite side of the trunnion connecting link arm.

Data plate location

The identification plate is located on the housing box cover.

Classification: Standard A.

CHARACTERISTICS

Length:	
M5	3 ft, 3 in.
M5A1	4 ft, 7 in.
Width:	
M5	1 ft, 3 in.
M5A1	
Height:	
M5	9¼ in.
M5A1	
Weight:	
M5	135 lb
M5A1	135 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7022

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

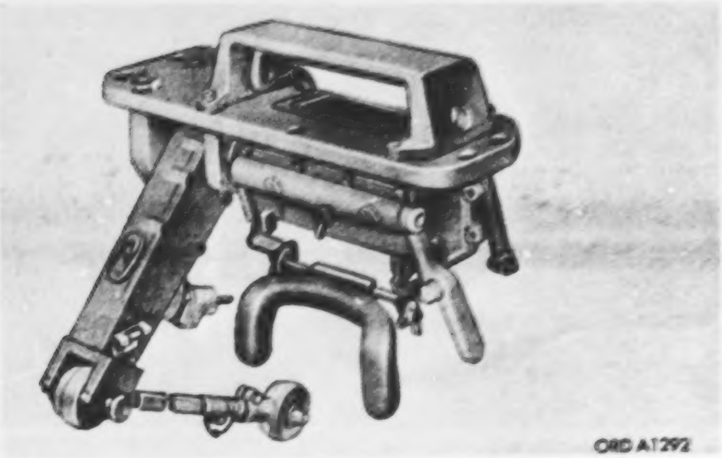
Shipped ballistic drives per box
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped ballistic drives per box
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-359, Section 2; SNL F-401; TM 9-6168; TM 9-6191.

DRIVE MOUNT, PERISCOPE: M9 (T36)



ORD A1292

Model	Secondary item Line item No.	Federal stock No.
M9		1290-612-1442

General

DRIVE MOUNT, PERISCOPE: M9 (T36), is a combination ballistic drive and periscope mount and is used with TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1 (T43E2).

The drive mount is a differential drive that depresses the line-of-sight of PERISCOPE: M29 in accordance with superelevation data received from the ballistic computer by means of a swivel drive shaft. The drive mount is also linked by a link assembly bar to the gun trunnion. This link assembly forms a parallelogram that acts as a solid linkage to transmit elevation or depression motion from the gun trunnion to the periscope drive mount.

Differences among models

Data plate location

The identification plate (nameplate) is located at the rear of the drive mount.

Classification: Standard A (OTCM 36540).

CHARACTERISTICS

Drive arm length	1 ft, 2 in.
Gun trunnion length	1 ft, 2 in.
Arm link length	3 ft, 11½ in.
Weight	161 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

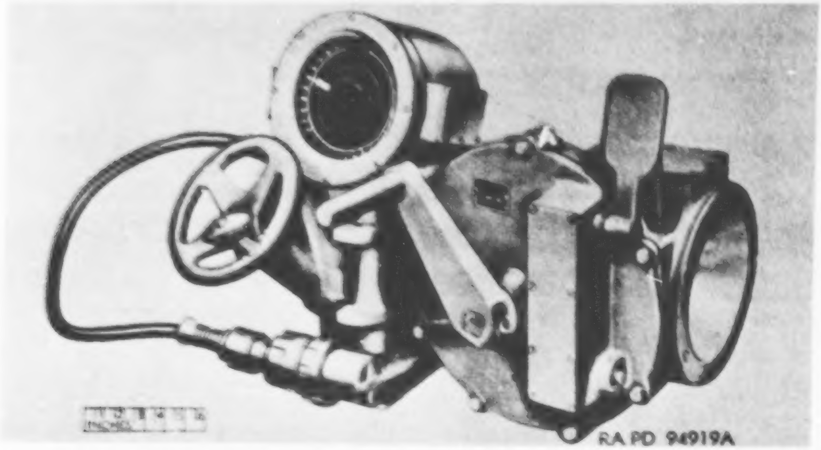
Shipped drive mounts per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped drive mounts per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-1290-270-35, TM 9-1290-270-35P.

FUZE SETTER: M13A1



RA PD 94919A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M13A1		1290-335-5046

General

FUZE SETTER: M13A1 is a manually-operated device, used with 90-mm antiaircraft materiel, for setting time fuzes in accordance with electrically transmitted fuze time data received from the antiaircraft director. The fuze setter is mounted on 90-mm antiaircraft gun mounts M1A1 and M2 used with FIRE CONTROL SYSTEM: antiaircraft, T33C.

Differences among models

Data plate location

Classification: Standard B (OTCM 36641).

CHARACTERISTICS

Length overall	1 ft, 9¾ in.
Width overall	1 ft, 7½ in.
Height overall	1 ft, 8¾ in.
Weight	141 lb
Fuze time scale (sec)	0 to 30

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

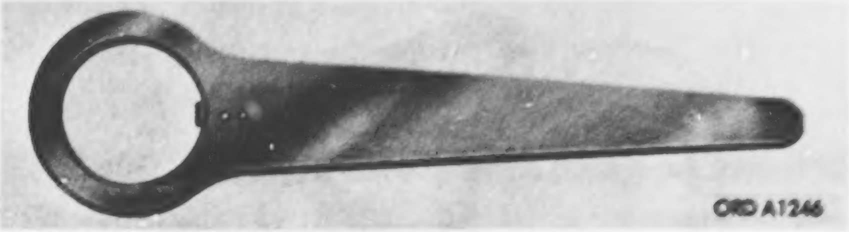
Shipped fuze setters per box
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped fuze setters per box
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-211, TM 9-1641.

FUZE SETTER: M14


ORD A1246

Secondary item

Model	*Line item No.*	*Federal stock No.*
M14		1290-417-4685

General

FUZE SETTER: M14 is essentially a hand wrench intended for use until hand-type fuse setters are issued for the weapon in use. It is used for all artillery ammunition using the M54, M55, or M77 time and super-quick fuzes and the M67 mechanical time fuze. After the fuze safety pin has been removed, the wrench is placed on the fuze with the tapered side of the hole fitting the fuze. The key engages the slot in the fuze and the handle is turned to set the fuse as required. It is a substitute for the fuze setter M27.

Differences among models

Data plate location

The identification data are stamped on the handle.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Length	$8\frac{3}{16}$ in.
Width	$2\frac{11}{16}$ in.
Depth	⅛ in.
Weight	0.47 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-4071-1

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 fuse setters per shipping container

Length	2 ft, ⅛ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 1⅝ in.
Volume	3.7 cu ft
Gross weight	140 lb
Ship tons	0.09

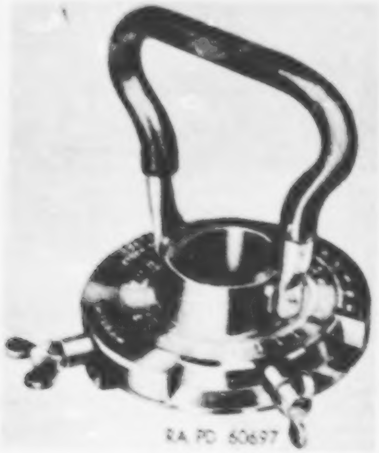
Outside Continental United States

Shipped 20 fuse setters per shipping container

Length	2 ft, ⅛ in.
Width	1 ft, 7⅛ in.
Height	1 ft, 1⅝ in.
Volume	3.7 cu ft
Gross weight	140 lb
Ship tons	0.09

References: SNL F-245, TM 9-1300.

FUZE SETTER: M22


RA PD 60697

Secondary item

Model	*Line item No.*	*Federal stock No.*
M22		1290-757-8410

General

FUZE SETTER: M22 is a hand operated dialed instrument for setting the mechanical time fuze of a projectile in order to detonate it at some predetermined time after the projectile leaves the cannon. The fuze setter is contoured to fit over the point of the fuze and a pawl of the fuze setter engages the setting ring on the fuze. A time scale and time corrector scale with corresponding indexes record the desired setting, the scales are locked with two clamping screws to insure against slipping of the setting and to limit the rotation of the fuze ring to the desired angle. The fuze setter consists of the setting handle assembly used in operating the fuze setter, the fuze setter body assembly, the time scale assembly, the time corrector scale assembly, and the stop pawl ring assembly.

The fuze setter M22 is used with fuzes of the TSQ M54 and the TSQ M55 series.

Differences among models

Data plate location

The identification data are stamped on the scale assembly.

Classification: Standard B.

CHARACTERISTICS

Time scale:	
Graduations	0 to 25 sec
Intervals	0.1 sec
Time corrector scale:	
Graduations	0 to 60 points
Intervals	1 point
Length	7⅝ in.
Width	5⅜ in.
Height	2 11/16 in.
Weight	4 lb, 8 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-210-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 fuze setters per shipping container

Length	1 ft, 9½ in.
Width	1 ft, 4½ in.
Height	1 ft, 2 in.
Volume	3 cu ft
Gross weight	135 lb
Ship tons	0.08

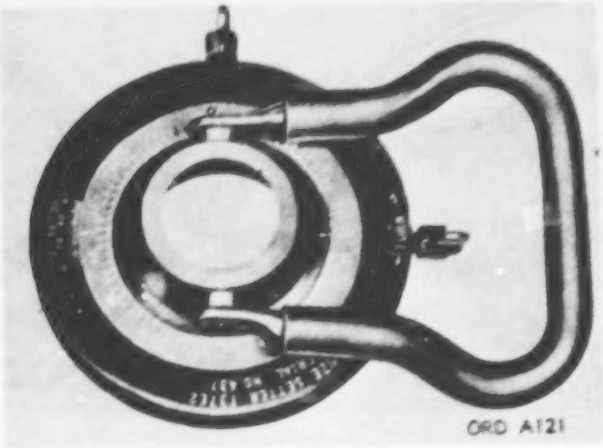
Outside Continental United States

Shipped 20 fuze setters per shipping container

Length	1 ft, 9½ in.
Width	1 ft, 4½ in.
Height	1 ft, 2 in.
Volume	3 cu ft
Gross weight	135 lb
Ship tons	0.08

References: SNL F-293, TM 9-575, TM-1590.

FUZE SETTER: M23



Secondary item

Model	*Line item No.*	*Federal stock No.*
M23		1290-758-2101

General

FUZE SETTER: M23 is a hand operated dialed instrument for setting the mechanical time fuze of a projectile in order to detonate it at some pre-determined time after the projectile leaves the cannon. The fuze setter is contoured to fit over the point of the fuze and a pawl of the fuze setter engages the setting ring on the fuze. A time scale and time corrector scale with corresponding indexes record the desired setting, the scales are locked with two clamping screws to insure against slipping of the setting and to limit the rotation of the fuze ring to the desired angle. The fuze setter consists of the setting handle assembly used in operating the fuze setter, the fuze setter body assembly, the time scale assembly, the time corrector scale assembly, and the stop pawl ring assembly.

The fuze setter M23 is used with fuzes of the MT M67 series, fuze MTSQ M500, and MTSQ M501.

Differences among models

Data plate location

The identification data are stamped on the scale assembly.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Time scale:	
Graduations	0 to 75 sec
Intervals	0.2 sec
Time corrector scale:	
Graduations	0 to 60 points
Intervals	1 point
Length	7$\frac{5}{8}$ in.
Width	6$\frac{5}{8}$ in.
Height	2$\frac{15}{16}$ in.
Weight	4 lb, 8 oz

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-210-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 fuze setters per shipping container

Length	1 ft, 9$\frac{1}{8}$ in.
Width	1 ft, 4$\frac{1}{8}$ in.
Height	1 ft, 2 in.
Volume	3 cu ft
Gross weight	135 lb
Ship tons	0.08

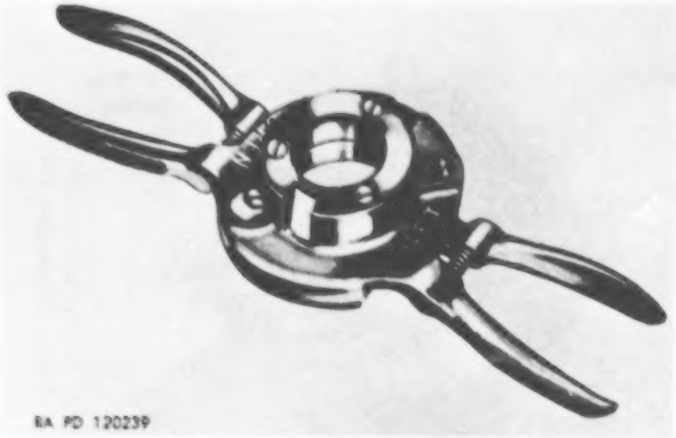
Outside Continental United States

Shipped 20 fuze setters per shipping container

Length	1 ft, 9$\frac{1}{8}$ in.
Width	1 ft, 4$\frac{1}{8}$ in.
Height	1 ft, 2 in.
Volume	3 cu ft
Gross weight	135 lb
Ship tons	0.08

References: SNL F-293, TM 9-575, TM-1590.

FUZE SETTER: M24



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M24		1290-720-2939

General

FUZE SETTER: M24 is a manually operated, hand held wrench-type fuze setter used with antiaircraft fire control equipment for presetting a quantity of 90-mm ammunition to the exact safe position before the round is inserted in the SETTER-RAMMER: fuze, combination, M20.

The fuze setter M24 is used with the GUN: 90-mm, M2 and the MOUNT, GUN: 90-mm, antiaircraft, M2.

Differences among models

Data plate location

Classification: Standard A.

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

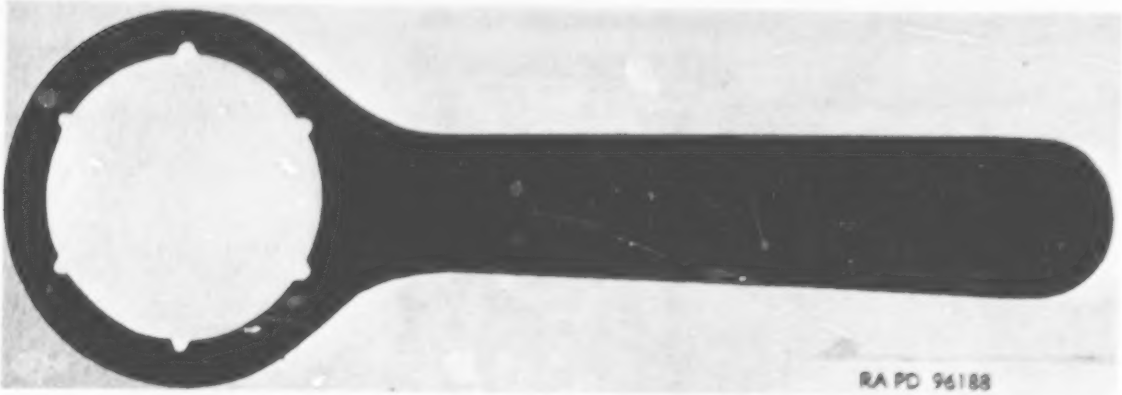
Shipped fuze setters per box
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Reference: SNL F-345.

FUZE SETTER: M25 (T42)



RA PD 96188

Secondary item

Model	*Line item No.*	*Federal stock No.*
M25	....	1290-767-4086

General

FUZE SETTER: M25 (T42) is a manually operated, hand held pressed steel one-piece wrench-type fuze setter which consists of a handle that widens out at one end and has a circular hole cut into it, with a series of six regularly spaced notches cut into the inside rim of the hole which fit the ribs on the time fuze. The fuze setter M25 has no scales or graduations, the setting of the fuze depending upon the reading of the scale engraved on the surface of the fuze.

The fuze setter M25 is used for setting FUZE, TIME: M84 (T78) on the SHELL, ILLUMINATING: M301 for the MORTAR: 81-mm, on MOUNT, MORTAR: 81-mm, M1 and M4.

Differences among models

Data plate location

The identification data are stamped on the handle.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

PERFORMANCE

The fuse setter M25 is unlimited for times that can be set.

EQUIPMENT

Basic Issue Items: See TM 9-3071-1

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 160 fuze setters per shipping container

Length	1 ft, 6⅛ in.
Width	1 ft, 5⅜ in.
Height	11⅝ in.
Volume	2.18 cu ft
Gross weight	51 lb
Ship tons	0.06

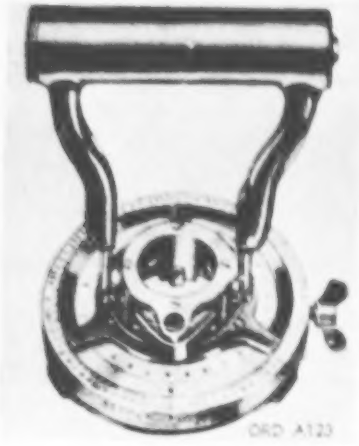
Outside Continental United States

Shipped 160 fuze setters per shipping container

Length	1 ft, 6⅛ in.
Width	1 ft, 5⅜ in.
Height	11⅝ in.
Volume	2.18 cu ft
Gross weight	51 lb
Ship tons	0.06

References: TM 9-575, TM 9-1590.

FUZE SETTER: M26 (T41)



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M26 (T41)		1290-344-4632

General

FUZE SETTER: M26 (T41) is a hand-operated dialed instrument used for setting counterclockwise time fuses in antiaircraft fire control equipment. It consists of the setting handle assembly which controls the setting of the instrument to a specific time value, the dial pointer, the dial time scales, the body assembly contoured to fit the nose of the fuse and containing the setting pawl which engages the setting groove of fuse being set; the base plate assembly, which serves to stop the fuze setter automatically when the correct fuse setting has been achieved; and the lamp assembly which illuminates the dial scales when a push button in the setting handle is activated. The thumbscrew, when tightened, locks the dial scale at the desired setting.

The fuse setter M26 (T41) is designed for counterclockwise setting of FUZE, MTSQ M500 and M501, but can also be used to set FUZE, M54, M55, and M67 series on various guns, including GUN, FIELD ARTILLERY, SELF-PROPELLED: 155-mm, M53 (T97).

Differences among models

Data plate location

The identification data are stamped on the side of the dial scale.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Scales (counterclockwise):

Outer	0 to 75 sec (0.2-sec intervals)
Inner	0 to 25 sec (0.1-sec intervals)
Length	6⅛ in.
Width	5⅛ in.
Height (handle in use)	6⅞ in.
Weight	6.5 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-210-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 fuse setters per shipping container

Length	1 ft, 9½ in.
Width	1 ft, 4½ in.
Height	1 ft, 2 in.
Volume	2.9 cu ft
Gross weight	155 lb
Ship tons	0.07

Shipped 15 fuse setters, w/carrying case, per shipping container

Length	2 ft, 5¼ in.
Width	1 ft, 9½ in.
Height	1 ft, 1⅝ in.
Volume	4.9 cu ft
Gross weight	185 lb
Ship tons	0.12

Outside Continental United States

Shipped 20 fuse setters per shipping container

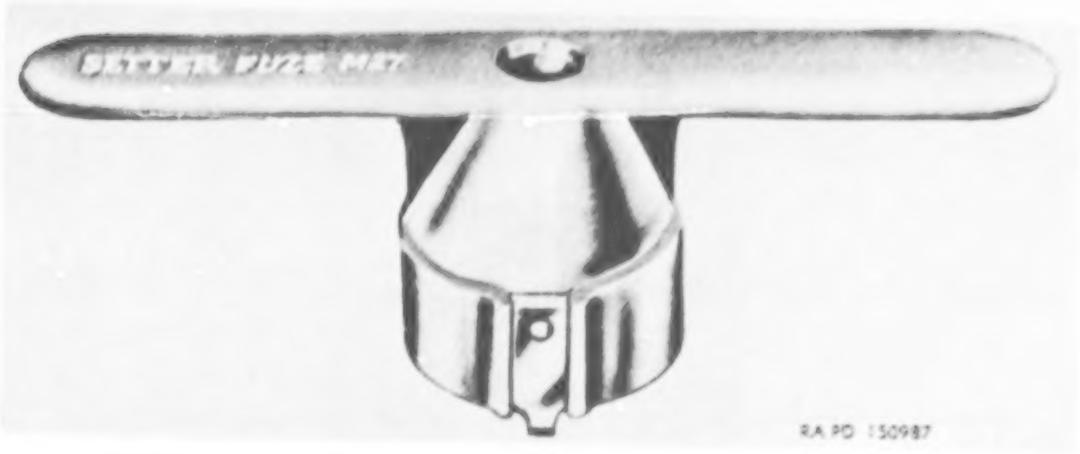
Length	1 ft, 9½ in.
Width	1 ft, 4½ in.
Height	1 ft, 2 in.
Volume	2.9 cu ft
Gross weight	155 lb
Ship tons	0.07

Shipped 15 fuse setters, w/carrying case, per shipping container

Length	2 ft, 5¼ in.
Width	1 ft, 9½ in.
Height	1 ft, 1⅝ in.
Volume	4.9 cu ft
Gross weight	185 lb
Ship tons	0.12

References: SNL F-349, TM 9-6133.

FUZE SETTER: M27 (T40)



RA PD 150987

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M27 (T40)		1290-764-7761

General

FUZE SETTER: M27 (T40) is a hand wrench-type instrument with a flat crosstee handle for two-handed operation and with a cone-shaped portion which consists of a bronze casting with a steel catch that is dovetailed and pinned to the casting opposite the center of the handle. The fuse setter M27 (T40) has no scale, the desired setting being obtained by reference to an index and time scale engraved on the fuse. The fuse setter M27 (T40) is used for setting time fuses, it is placed in position upon the fuse to receive the fuse in its cone shaped opening, the steel catch is pushed firmly into the fuse setting groove, and the fuse setter is rotated to the desired setting.

The fuse setter M27 (T40) is a substitute fuse setter for all field artillery weapons utilizing FUZE, TSQ: M54 and M55 series: FUZE, TSQ: M77; FUZE, MT: M67 series; and FUZE, MTSQ: M500 and M501 and is used with various gun carriages; antiaircraft gun mounts; self-propelled guns; tracked armored landing vehicles; howitzer carriages; self-propelled howitzers; tank recovery vehicles; GUN, ANTITANK, SELF-PROPELLED: 90-mm, M56; and GUN, FIELD ARTILLERY, SELF-PROPELLED: 155-mm, M53 (T97); and is standard for use with all tank materiel.

Differences among models

Data plate location

The identification data are cast on the crosstee handle.

Classification: Standard A.

CHARACTERISTICS

Length	8 in.
Width	3⅛ in.
Height	3⅝ in.
Weight	3 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 50 fuse setters per shipping container

Length	1 ft. 10⅛ in.
Width	1 ft. 7⅝ in.
Height	1 ft. 8⅛ in.
Volume	4.5 cu ft
Gross weight	180 lb
Ship tons	0.11

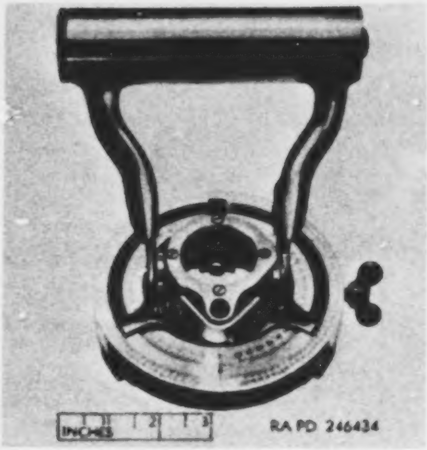
Outside Continental United States

Shipped 50 fuse setters per shipping container

Length	1 ft. 10⅛ in.
Width	1 ft. 7⅝ in.
Height	1 ft. 8⅛ in.
Volume	4.5 cu ft
Gross weight	180 lb
Ship tons	0.11

References: SNL F-357, TM 9-1300.

FUZE SETTER: M28 (T46)



RA PD 246434

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M28 (T46)		1290-300-8033

General

FUZE SETTER: M28 (T46) is a hand-operated dialed instrument used for setting clockwise time fuzes in antiaircraft fire control equipment. It consists of the setting handle assembly which controls the setting of the instrument to a specific time value, the dial pointer, the dial time scales, the body assembly contoured to fit the nose of the fuze and containing the setting pawl which engages the setting groove of the fuze being set, the base plate assembly which serves to stop the fuze setter automatically when the correct fuze setting has been achieved, and the lamp assembly which illuminates the dial scales when a push button in the setting handle is activated. The thumbscrew, when tightened, locks the dial scale at the desired setting.

The fuze setter M28 (T46) is designed for clockwise setting of FUZE, MTSQ: T197, T250, and T289, and FUZE, PROXIMITY, ARTILLERY: M513 and M514, associated with various gun carriages, including MORTAR, SELF-PROPELLED, HALF TRACKED: 81-mm, M4, M4A1, and M21.

Differences among models

Data plate location

The identification data are stamped on the side of the dial scale.

Classification: Standard B.

CHARACTERISTICS

Scales (clockwise):	
Outer	0 to 100 sec (0.2-sec intervals)
Inner	0 to 45 sec (0.1-sec intervals)
Length	7⅝ in.
Width	6⅜ in.
Height:	
Handle folded	2⅛ in.
In use	6⅞ in.
Weight	5.8 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-212-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

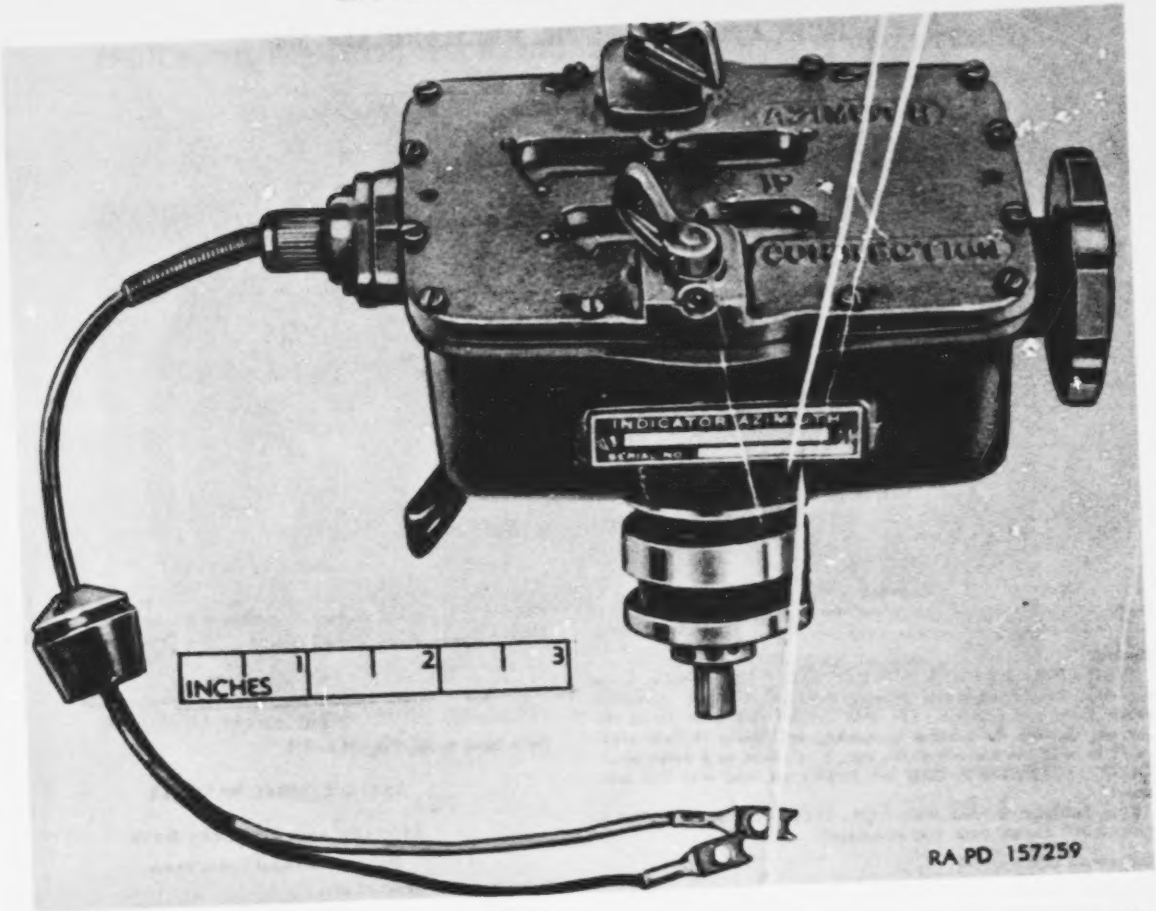
Shipped 20 fuze setters per shipping container	
Length	1 ft, 9⅛ in.
Width	1 ft, 4½ in.
Height	1 ft, 2 in.
Volume	2.9 cu ft
Gross weight	155 lb
Ship tons	0.07
Shipped 15 fuze setters, w/carrying case, per shipping container	
Length	2 ft, 5¼ in.
Width	1 ft, 9½ in.
Height	1 ft, 1⅛ in.
Volume	4.9 cu ft
Gross weight	185 lb
Ship tons	0.12

Outside Continental United States

Shipped 20 fuze setters per shipping container	
Length	1 ft, 9⅛ in.
Width	1 ft, 4½ in.
Height	1 ft, 2 in.
Volume	2.9 cu ft
Gross weight	155 lb
Ship tons	0.07
Shipped 15 fuze setters, w/carrying case, per shipping container	
Length	2 ft, 5¼ in.
Width	1 ft, 9½ in.
Height	1 ft, 1⅛ in.
Volume	4.9 cu ft
Gross weight	185 lb
Ship tons	0.12

References: SNL F-390, TM 9-6189-50P, TM 9-1290-266-35.

INDICATOR, AZIMUTH: M24 (T23)



RA PD 157259

Model	*Line item No.*	*Federal stock No.*
M24 (T23)		1290–764–7798

General

INDICATOR, AZIMUTH: M24 (T23) gives azimuth deflection in mils in order to permit adjustment of observed fire. It consists of a cast metal housing with an internal frame supporting four counter groups. The upper windows in the cover display right and left azimuth readings. The lower windows display right and left deflection correction settings (gunner's aid). Shutter levers control shutters which blank out counters not in use. An instrument light is provided for night operation.

The azimuth indicator M24 (T23) is used on MOUNT, INDICATOR: ORD No. 7694898 with the LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1, on the GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin, 40-mm, M19A1.

Differences among models

Data plate location

The identification plate is located on the side of the housing.

Classification: Standard A.

CHARACTERISTICS

Counters:	
Azimuth:	
Right	0 to 9,990 mils
Left	0 to 9,990 mils
Deflection correction:	
Right	0 to 990 mils
Left	0 to 990 mils
Length	7 in.
Width	5½ in.
Depth	3½ in.
Weight	

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped azimuth indicators per box.

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped azimuth indicators per box.

Length

Width

Height

Volume

Gross weight

Ship tons

References: SNL F-355, TM 9–1620.

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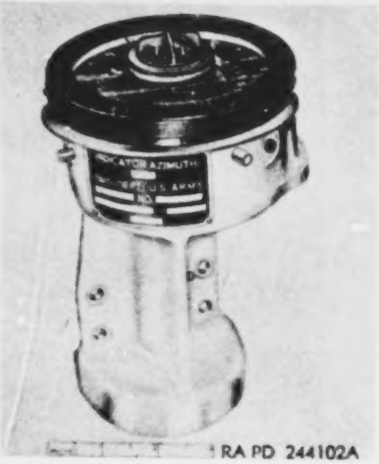
INDICATOR, AZIMUTH, MECHANICAL: M27



RA PD 244102A

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M27	------------	1290-335-5062

General

INDICATOR, AZIMUTH, MECHANICAL: M27 consists of a mounting bracket and gear housing together with the necessary gears, dials, and pointers. The tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given point. LIGHT, INSTRUMENT: ORD No. 7983714 is used with this indicator.

This indicator is used with GUN, SELF-PROPELLED, FULL TRACKED: 40-mm, twin, M42 and M42A1.

Differences among models

Data plate location

The identification plate (nameplate) is located on the bearing housing.

Classification: Standard A (OTCM 35012).

CHARACTERISTICS

Dial graduations (100-mil)	0 to 6,400 mils, numbered every 200 mils.
Dial graduations (1-mil)	0 to 100 mils, numbered every 5 mils.
Gunner's aid dial graduations	0 to 50 mils, right and left, numbered every 5 mils.
Height	1 ft
Diameter	7 in.
Weight	19 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7218.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

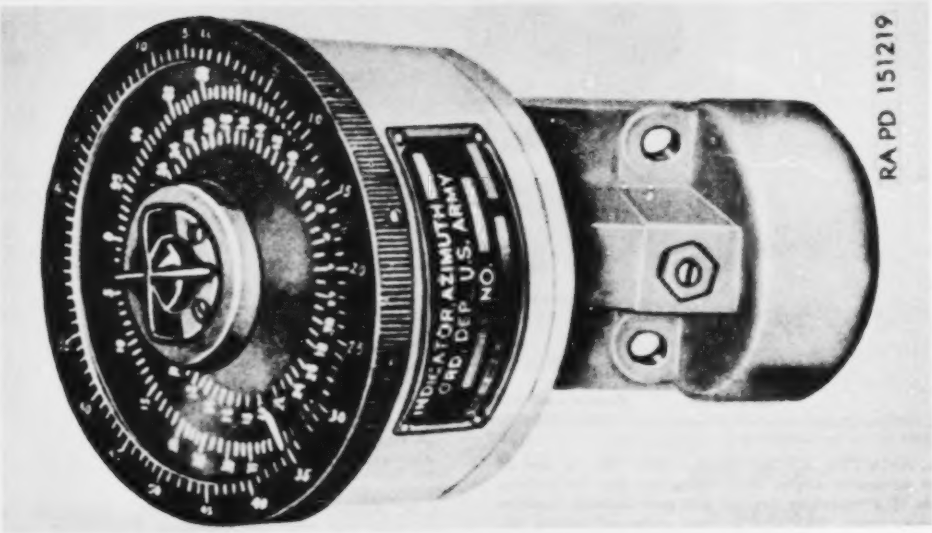
Shipped indicators per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped indicators per
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-389, TM 9-1290-270-35.

INDICATOR, AZIMUTH, MECHANICAL: M28 (T28) AND M28A1 (T28E1)



Model	*Secondary item* *Line item No.*	*Federal stock No.*
M28 (T28)		1290-736-4342
M28A1 (T28E1)		1290-346-8247

General

INDICATOR, AZIMUTH, MECHANICAL: M28 (T28) or M28A1 (T28E1), is used in tanks to lay off horizontal angles when laying the gun for indirect fire. It consists of a mounting bracket and gear housing, together with the necessary gears, dials, and pointers, arranged so that the tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given aiming point. Indirect lighting of the dials is provided by instrument light. A switch, located on top of the battery case, controls the lamps.

The azimuth indicator M28 (T28) is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M48 and M48C. The azimuth indicator M28A1 (T28E1) is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1 and M48A2.

Differences among models

The major differences between the M28 (T28) and M28A1 (T28E1) are in the internal gearing.

Data plate location

The identification plate is located on the side of the gear housing.

Classification: Standard A.

CHARACTERISTICS

Dial graduations:	
100-mil	0-3,200, 0-3,200 mils
1-mil	0-100 mils
Gunner's aid dial (1-mil)	0-80 mils R&L
Number of pointers	3
Height	12 in.
Diameter	7 in.
Weight	19 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

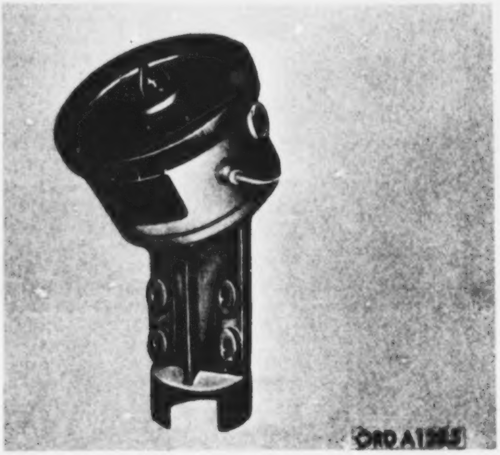
Shipped azimuth indicators per box.
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped azimuth indicators per box.
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-389, section 2; TM 9-1290-263-34.

INDICATOR, AZIMUTH, MECHANICAL: M30 (T25)



Model	*Line item No.*	*Federal stock No.*
M30 (T25)		1290-739-8938

General

INDICATOR, AZIMUTH, MECHANICAL: M30 (T25) is used in tanks to lay off horizontal angles when laying the gun for indirect fire. It consists of a mounting bracket and gear housing together with the necessary gears, dials and pointers, arranged so that the tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given aiming point. Indirect lighting of the dials is provided by instrument light. A switch, located on top of the battery case, controls the lamps.

The azimuth indicator M30 (T25) is used with TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 (T43E1).

Differences among models

Data plate location

The identification plate is located on the side of the gear housing.

Classification: Standard B (OTCM 36117).

CHARACTERISTICS

Dial graduations:
- 100-mil ---------- 0-3,200,0-3,200 mils
- 1-mil ---------- 0-100 mils
- Gunner's aid dial (1-mil) ---------- 0-50 mils R&L

Number of pointers ---------- 3
Height ----------
Diameter ----------
Weight ----------

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

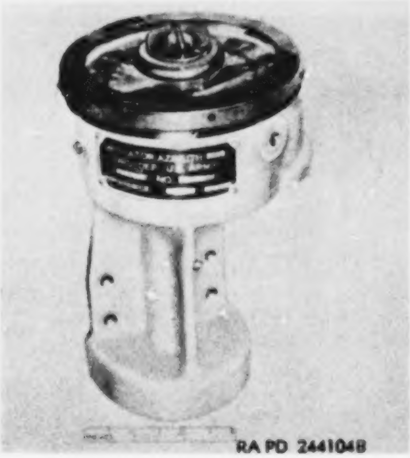
Shipped azimuth indicators per box.
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped azimuth indicators per box.
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Reference: SNL F-389, Section 2.

INDICATOR, AZIMUTH, MECHANICAL: M31 (T24)



RA PD 244104B

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M31		1290-753-7555

General

INDICATOR, AZIMUTH, MECHANICAL: M31 consists of a mounting bracket and gear housing together with the necessary gears, dials, and pointers. The tank turret ring gear drives the pointer through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given point. The position of the gun in relation to the longitudinal axis of the vehicle is also indicated at this time. LIGHT, INSTRUMENT: 6578454, is used with these azimuth indicators.

The M31 azimuth indicator is used with TANK, COMBAT, FULL TRACKED: 76-mm gun, M41 and M41A1; TANK, COMBAT, FULL TRACKED: 90-mm gun, M47; and COMBAT ENGINEER VEHICLE, FULL TRACKED: 165-mm gun, M102.

Differences among models

Data plate location

The identication plate (nameplate) is located on the bearing housing.

Classification: Standard A (OTCM 35298).

CHARACTERISTICS

Dial graduations (100-mil)	0–3,200, 0–3,200 mils
Dial graduations (1-mil)	0–100 mils
Gunner's aid dial graduation	0–50 mils right and left
Height	1 ft
Diameter	7 in.
Weight	19 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-201-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped indicators per
Length ____
Width ____
Height ____
Volume ____
Gross weight ____
Ship tons ____

Outside Continental United States

Shipped indicators per
Length ____
Width ____
Height ____
Volume ____
Gross weight ____
Ship tons ____

References: SNL F-389, TM 9-1290-271-35.

INDICATOR, AZIMUTH, MECHANICAL: T27

RA PD 244107A

Model	*Line item No.*	*Federal stock No.*
T27	--------------	1290-039-9832

General

INDICATOR, AZIMUTH, MECHANICAL: T27 consists of a mounting bracket and gear housing together with the necessary gears, dials, and pointers. The tank turret ring gear drives the pointers through the gearing to indicate, by means of dials graduated in mils, the position of the gun in relation to a given point. The position of the gun in relation to the longitudinal axis of the vehicle is also indicated at this time. LIGHT, INSTRUMENT: 6578454 is used with this azimuth indicator.

This indicator is used wth GUN, SELF-PROPELLED, FULL TRACKED: 155-mm, M53 and HOWITZER, SELF-PROPELLED, FULL TRACKED: 8-inch, M55.

Differences among models

Data plate location

The identification plate (nameplate) is located on the bearing housing.

Classification: Standard A.

CHARACTERISTICS

Dial graduations (100-mil)	0 to 3,200, 0 to 3,200 mils
Dial graduations (1-mil)	0 to 100
Gunner's aid dial graduations	0 to 50, right and left

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-210-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

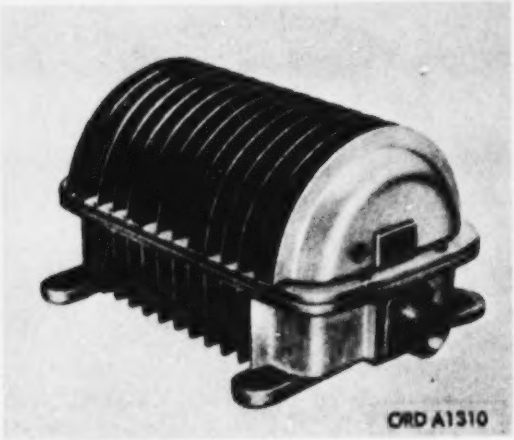
Shipped indicators per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped indicators per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Reference: SNL F-389.

INVERTER (ORD No. 7633698)


ORD A1310

Secondary item

Model	*Line item No.*	*Federal stock No.*
(as above)	....	1290-763-3698

General

INVERTER, ORD No. 7633698, is used on TANK, COMBAT, FULL TRACKED: 90-mm gun, M47. It converts the 24-volt direct current power supply in the vehicle to 115-volt, 400 cycle alternating current required for operation of the transmitter in the superelevation transmitter and the receiver in the range finder.

Differences among models

Data plate location

The identification plate (nameplate) is located on the left side of the inverter.

Classification: Standard A.

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-262

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 inverters per shipping container

Length	2 ft, 9¾ in.
Width	2 ft, 4 in.
Height	1 ft, 6½ in.
Volume	10.12 cu ft
Gross weight	199 lb
Ship tons	0.25

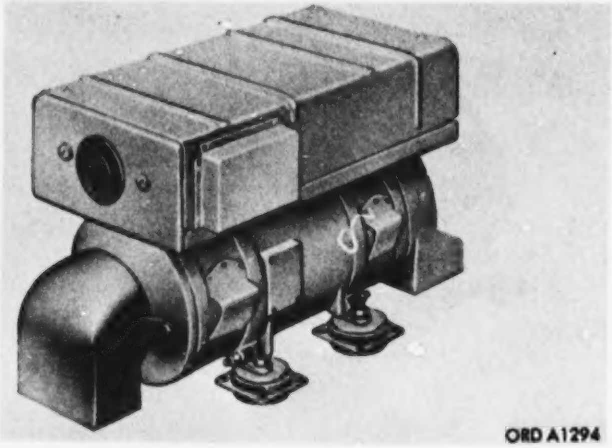
Outside Continental United States

Shipped 6 inverters per shipping container

Length	2 ft, 9¾ in.
Width	2 ft, 4 in.
Height	1 ft, 6½ in.
Volume	10.12 cu ft
Gross weight	199 lb
Ship tons	0.25

References: SNL F-369, TM 9-7011.

INVERTER, ASSEMBLY: (ORD No. 8603214)


ORD A1294

Secondary item

Model	*Line item No.*	*Federal stock No.*
(as above)	....	1290-622-4883

General

INVERTER, ASSEMBLY: ORD No. 8603214 is used with TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1. The inverter assembly changes direct current input into a multiple phase alternating current output.

Differences among models

Data plate location

Plate is located on main housing.

Classification: Standard A.

CHARACTERISTICS

Length	(approx) $15\frac{5}{32}$ in.
Width	(approx) $7\frac{3}{32}$ in.
Height	(approx) $8\frac{7}{16}$ in.

PERFORMANCE

Input rating	27.5v dc, 36.5 amp (full load), 11.0 amp dc (no load).
Output rating	500 va, 3-phase, 115v ac, 400 cps, power factor 0.9

EQUIPMENT

Basic Issue Items: See TM 9-2350-214-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 inverter assemblies per shipping container

Length	2 ft, 5 in.
Width	2 ft, 2¼ in.
Height	1 ft, 9½ in.
Volume	9.925 cu ft
Gross weight	166 lb
Ship tons	0.24

Outside Continental United States

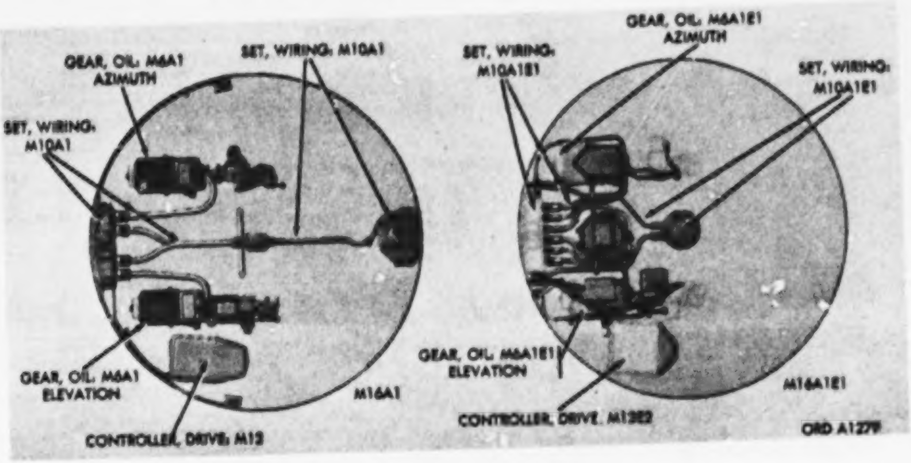
Shipped 4 inverter assemblies per shipping container

Length	2 ft, 5 in.
Width	2 ft, 2¼ in.
Height	1 ft, 9½ in.
Volume	9.525 cu ft
Gross weight	166 lb
Ship tons	0.24

Reference: TM 9-1290-321-35P.

LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1 AND M16A1E1

(Includes system components listed below)



Model	*Secondary item Line item No*	*Federal stock No.*
M16A1		1290–759–7802
M16A1E1		1290–766–5876

General

LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1 or M16A1E1, is composed of four major components and connecting hardware. These components are two GEAR, OIL: M6A1 or M16A1E1, one for azimuth and one for elevation; one CONTROLLER, DRIVE: M12 or M12E2; and one SET, WIRING: M10A1 or M10A1E1, respectively. The CONTROLLER, DRIVE: M12 or M12E2 imparts electrical signals to the azimuth and elevation GEAR, OIL: M6A1 or M6A1E1 through a synchronous system. It also provides for electrical firing of the dual gun. The GEAR, OIL: M6A1 or M6A1E1 is an electric-hydraulic power unit. It converts the electrical signals from the CONTROLLER, DRIVE: M12 or M12E2 into mechanical power for transversing or elevating the dual gun. The SET, WIRING: M10A1 or M10A1E1 provides for converting the 24-volt dc power supply of the vehicle to 115-volt, 60-cycle, single-phase ac for use by the synchronous system and contains control connections. It also feeds the 24-volt dc to the electric drive motor of each oil gear and to the firing solenoids. The antiaircraft gun local control system M16A1 or M16A1E1 is a manually controlled electro-hydraulic servo-mechanism which employs aided tracking, and controls the dual gun smoothly and rapidly in azimuth and elevation in immediate response to the tracking of aircraft by the gunner. It is normally used for direct fire against aircraft, but it may also be used for indirect fire against ground targets.

The antiaircraft gun local control systems M16A1 and M16A1E1 are used with the GUN, SELF-PROPELLED, FULL-TRACKED: TWIN, 40-mm, M19A1 and M42 or M42A1, respectively.

Components:	Page
GEAR, OIL: M6A1 and M6A1E1	18–30
CONTROLLER, DRIVE: M12 and M12E2	18–31
SET, WIRING: M10A1 and M10A1E1	18–32

Differences among models

M16A1 has both azimuth and elevation switch assemblies used with the azimuth and elevation oil gears, and two lighting device assemblies (right and left) for the purpose of casting the reticle pattern on SIGHT, REFLEX: M23 and M24, and it has a 4,500 rpm oil gear drive motor. M16A1E1 has only the elevation switch assembly, serving as a master switch for starting the elevation and azimuth oil gear dc motors and the inverter dc motor, it has one lighting device used to illuminate the reticle of SIGHT, REFLEX: M24C, and has a 4,300 rpm oil gear drive motor.

Classification

M16A1	Standard C (OTCM 37107)
M16A1E1	Standard A

CHARACTERISTICS

Synchro system:	
Voltage	115-volt ac
Frequency	60 cycles
Phase	1
Oil gear drive motors:	
Quantity	2
Horsepower	1½
Speed:	
M6A1	4,500 rpm
M6A1E1	4,300 rpm
Volts	24-volt dc
Power:	
Supply	24-volt dc
Operating:	
Oil gear drive motors	24-volt dc
Inverter motor	24-volt dc
Synchronous system	115-volt ac, 60-cycles, single phase

PERFORMANCE

Limits of gun travel:	
Azimuth	no limit
Elevation	—3 deg to + 85 deg
Gun travel speed:	
Azimuth	40°/sec
Elevation	25°/sec

EQUIPMENT

Basic Issue Items: See ORD 7 SNL F-315.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	per container
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-315, TM 9-6087, TM 9-6089, TM 9-1290-241-35P.

GEAR, OIL: M6A1 AND M6A1E1

SHOWN:
M6A1 OR M6A1E1

ORD A1630

Secondary item

Model	*Line item No.*	*Federal stock No.*
M6A1	--------------	1290–335–5061
M6A1E1	--------------	1290–766–5297

General

GEAR, OIL: M6A1 or M6A1E1, consists of a two-compartment completely sealed main case assembly, housing a 24-volt dc electric motor which drives the hydraulic transmission oil pump, controlled by the stroke control valve assembly; has an oil motor; a hydraulic limit stop system containing cams slewing and boresighting clutches, serving to connect shafts; and the electrical synchronous system. The oil gear M6A1 or M6A1E1 is an electro-hydraulic power unit for converting electrical control data originating in the CONTROLLER, DRIVE: M12 or M12E2, respectively, into mechanical power. The LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1 or M16A1E1 employs two units of the oil gear M6A1 or M6A1E1, one for azimuth and one for elevation. The elevation oil gear provides power to elevate the gun between the limits of 3° depression and 85° elevation. The azimuth oil gear provides power to rotate the gun mount in either direction through a full 360°. The azimuth or elevation oil gear M6A1 or M6A1E1 are identical except for the positions of the hydraulic limit stop system cams. Electrical power, 24-volt dc, is supplied to the azimuth and elevation oil gear M6A1 or M6A1E1 by cables leading to the distribution box assembly.

The oil gear M6A1 and M6A1E1 is a component of LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1 and M16A1E1 used with the GUN, SELF-PROPELLED, FULL-TRACKED: TWIN, 40-mm, M19A1 and M42 or M42A1, respectively.

Differences among models

M6A1 has a 4,500 rpm electric drive motor and a synchronous resetter transmitter geared to the oil motor of the hydraulic transmission, which detects error in gun travel, and electrically repositions the synchronous differential controlling the stroke of the oil pump. M6A1E1 has a 4,300 rpm electric drive motor, a starter assembly serving as an electrical distribution center for the various electrical components, and a receiver assembly which is a means of balancing the electrical signals with the speed of the oil gear.

Data plate location

The identification plate (nameplate) is located on the main case assembly.

Classification

M6A1	Standard C (OTCM 37107)
M6A1E1	Standard A

CHARACTERISTICS

Electric drive motor:	
Voltage	24-volt dc
Horsepower	1½
Speed:	
M6A1	4,500 rpm
M6A1E1	4,300 rpm
Hydraulic transmission pump:	
Speed:	
M6A1	3,500 rpm
M6A1E1	(approx) 3,000 rpm
Transmission operating pressure:	
M6A1	1,600 psi
M6A1E1	1,500 to 1,800 psi
Synchronous system:	
Volts	115-ac, 1-phase, 60-cycle
Length:	
M6A1	21⅝ in.
M6A1E1	20½ in.
Width:	
M6A1	10½ in.
M6A1E1	11 in.
Height:	
M6A1	21⅝ in.
M6A1E1	28 in.
Weight:	
M6A1	250 lb
M6A1E1	299 lb

Electric drive motor—Continued

PERFORMANCE

Limits of gun travel:	
Azimuth	no limit
Elevation	−3° to +85°
Gun travel speed:	
Azimuth	40°/sec
Elevation	25°/sec

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M6A1

Within Continental United States

Shipped 1 oil gear per box.

Length	26 in.
Width	14¾ in.
Height	23⅝ in.
Volume	5.2 cu ft
Gross weight	295 lb
Ship tons	0.13

Outside Continental United States

Shipped per

Length	27½ in.
Width	16 in.
Height	26 in.
Volume	6.6 cu ft
Gross weight	310 lb
Ship tons	0.165

M6A1E1

Within Continental United States

Shipped 1 oil gear per box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

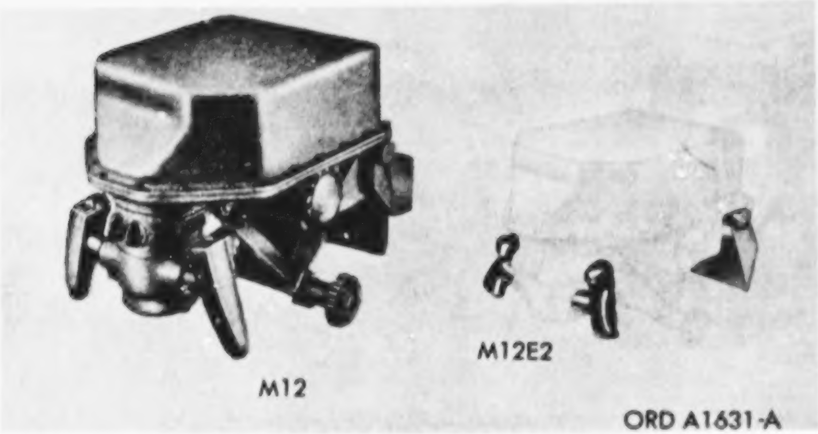
Outside Continental United States

Shipped per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-315, TM 9-6087, TM 9-6089, TM 9-1290-241-35P.

CONTROLLER, DRIVE: M12 AND M12E2



ORD A1631-A

Model	*Secondary item Line item No.*	*Federal stock No.*
M12		1290-344-4625
M12E2		1290-766-5397

General

CONTROLLER, DRIVE: M12 or M12E2, consists of a turret assembly with left and right grip assemblies, gears, cams, two variable speed drive assemblies, powered by a common electric motor; and two transmitters with spider assemblies (mechanical differentials) splined to the rotors of the synchro-type torque transmitters. The cams, drive assemblies, and transmitter with spider assemblies can be divided into two identically functioning systems, the right side azimuth system and the left side elevation system. The turret assembly consists of a turret and movable left and right grip assemblies, and is manually controlled by the gunner. When the grip assemblies are displaced from their neutral position, or the turret assembly is rotated, the drive controller M12 or M12E2 causes an immediate angular displacement of the rotors of the synchro-type torque transmitters. A trigger switch assembly is provided in each grip assembly for firing the dual gun electrically. The drive controller M12 or M12E2 functions to provide aided, one man tracking in both azimuth and elevation. It receives from the gunner manual signals indicating the desired gun mount travel or position, and transforms them into corresponding synchronous electrical signals which are transmitted to the azimuth and the elevation GEAR, OIL: M6A1 or M6A1E1, which, in turn, hydraulically position the gun on target, in both azimuth and elevation.

The drive controller M12 or M12E2 is a component of LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1 and M16A1E1 used with GUN, SELF-PROPELLED, FULL-TRACKED: TWIN, 40-mm, M19A1 and M42 or M42A1, respectively.

Differences among models

The drive controller M12E2 has improved grip assemblies with hand grips shaped to receive the contour of the fingers. There are minor design differences in the shape of components.

Data plate location

The identification plate (nameplate) is located on the side of the turret assembly.

Classification

M12	Standard C
M12E2	Standard A

CHARACTERISTICS

Motor:	
Volts	115-ac, 1-phase, 60-cycle
Horsepower	1/50
Speed:	
M12	1,550 rpm
M12E2	1,725 rpm
Torque transmitters:	
Quantity	2
Volts	115-ac, 1-phase, 60-cycle
Length:	
M12	
M12E2	19 in.
Width:	
M12	
M12E2	13 in.
Height:	
M12	
M12E2	17⅛ in.
Weight:	
M12	
M12E2	94 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

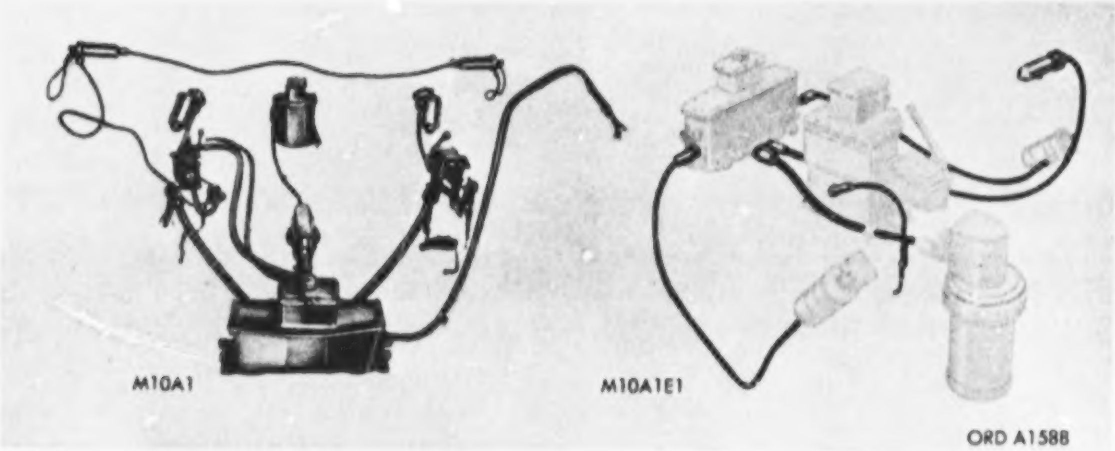
Shipped	1 drive controller per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	1 drive controller per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-315, TM 9-6087, TM 9-6089, TM 9-1290-241-35P.

SET, WIRING: M10A1 AND M10A1E1



Model	*Secondary item Line item No.*	*Federal stock No.*
M10A1		1290–335–5060
M10A1E1		1290–766–5897

General

SET, WIRING: M10A1 or M10A1E1 consists of the slipring assembly which serves to pick up the 24-volt dc vehicle supply, while allowing the top carriage to be turned in azimuth, the inverter box assembly which converts 24-volt dc into 115-volt, 60-cycle ac; the distribution box assembly, which houses terminal blocks and relays; two firing solenoids, energized simultaneously, which actuate the firing plungers of the twin guns; and the cable assembly. The wiring set M10A1 or M10A1E1 distributes the 24-volt dc from the gun motor carriage supply source to the various components of the fire control materiel, provides for converting the 24-volt dc power supply to 115-volt, 60-cycle, single-phase ac for use by the synchronous system, conducts the interphone circuits from the gun motor carriage to the top carriage, and feeds the 24-volt dc to the electric drive motor of each GEAR, OIL: M6A1 or M6A1E1 and to the firing solenoids.

The function of the wiring set M10A1 or M10A1E1 is to receive, regulate, and distribute electrical power to operate and control the mechanical and hydraulic components of the LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1 and M16A1E1 used with the GUN, SELF-PROPELLED, FULL-TRACKED: TWIN, 40-mm, M19A1 and M42 or M42A1, respectively.

Differences among models

The wiring set M10A1 has both azimuth and elevation switch assemblies of the GEAR, OIL: M6A1, and a right side and left side lighting device assemblies, which cast the reticle patterns on the SIGHT, REFLEX: M23 and M24. Model M10A1E1 has only the elevation switch assembly, which serves as an electrical master switch starting both the elevation and azimuth 24-volt dc motors of GEAR, OIL: M6A1E1 and the inverter dc motor, and mechanically and hydraulically connects the gun mount to power operation. M10A1E1 has one lighting device assembly which illuminates the reticle of the SIGHT, REFLEX: M24C.

Data plate location

Classification

M10A1	Standard C
M10A1E1	Standard A

CHARACTERISTICS

Inverter:	
Speed	3,600 rpm
Voltage:	
Input	24-volts dc
Output	115-volts ac, 1-phase, 60-cycle
Synchro system:	
Voltage	115-volts ac
Phase	single
Frequency	60-cycle

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M10A1

Within Continental United States

Shipped 1 wiring set per box
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped 1 wiring set per box
Length
Width
Height
Volume
Gross weight
Ship tons

M10A1E1

Within Continental United States

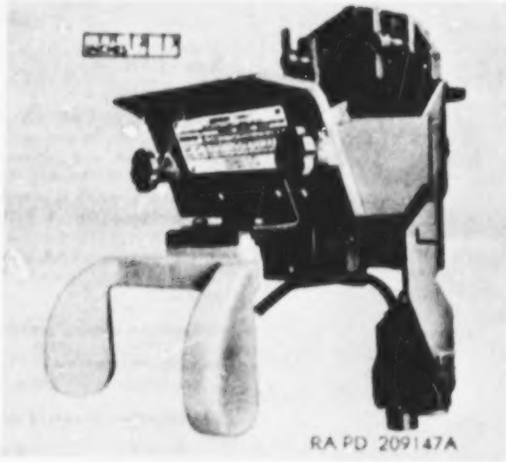
Shipped 1 wiring set per box
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped 1 wiring set per box
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-315, TM 9-6087, TM 9-6089, TM 9-1290-241-35P.

MOUNT, PERISCOPE: M88 (T176)



RA PD 209147A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M88 (T176)	....	1290-765-2074

General

MOUNT, PERISCOPE: M88 (T176) consists of a bracket, guard with headrest, and gun-ready signal light assembly. It is located at the gunner's station of the 90-mm gun tank M47. The mount, which is attached to the roof, is used to support the periscope M20. A guard assembly, with attached full headrest, is provided at the rear of the mount to protect the observer if the periscope head is hit. Two guard knobs secure the guard assembly to the mount. The signal light extends below the bracket to which it is mounted.

Differences among models

Data plate location

The identification plate is located on the bracket assembly.

Classification: Standard A.

CHARACTERISTICS

Weight	24 lb
Length	1 ft, 2 in.
Width	11 in.
Height	1 ft, 1⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-262

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscope mounts per shipping container

Length	2 ft, 4½ in.
Width	2 ft, 8 in.
Height	2 ft, 2⅛ in.
Volume	11.75 cu ft
Gross weight	182 lb
Ship tons	0.29

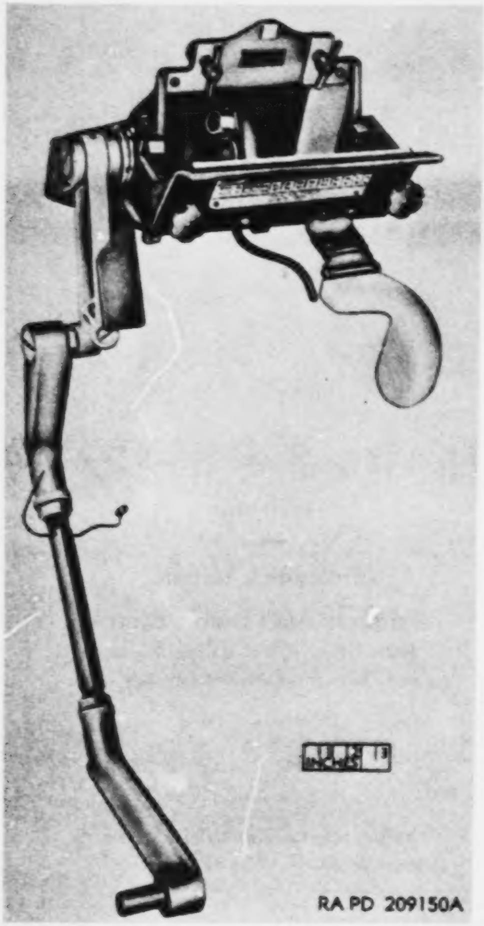
Outside Continental United States

Shipped 6 periscope mounts per shipping container

Length	2 ft, 4½ in.
Width	2 ft, 8 in.
Height	2 ft, 2⅛ in.
Volume	11.75 cu ft
Gross weight	182 lb
Ship tons	0.29

References: SNL F-358, TM 9-6055.

MOUNT, PERISCOPE: M89 (T177)



RA PD 209150A

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M89 (T177)		1290-765-2069

General

MOUNT, PERISCOPE: M89 (T177), located at the commander's station of the 90-mm gun tank M47, consists of a bracket, guard with headrest, and gun-ready signal light assembly. Linkage on the left side of the bracket provides coupling to the ballistic drive M3. The mount, which is attached to the turret roof, is used to support the periscope M20. A guard assembly, with attached right-side half headrest, is provided at the rear of the mount to protect the observer if the periscope head is hit. Two guard knobs secure the guard assembly to the mount. The signal light is mounted within the bracket.

Differences among models

Data plate location

The identification plate is located on the bracket assembly.

Classification: Standard A.

CHARACTERISTICS

Weight	84 lb
Length	1 ft, 7 in.
Width	1 ft, ⅝ in.
Height	1 ft, 7⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-262

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 4 periscope mounts per shipping container

Length	1 ft, 9⅛ in.
Width	1 ft, 8¼ in.
Height	1 ft, 4⅝ in.
Volume	4.25 cu ft
Gross weight	157.5 lb
Ship tons	0.11

Outside Continental United States

Shipped 4 periscope mounts per shipping container

Length	1 ft, 9⅛ in.
Width	1 ft, 8¼ in.
Height	1 ft, 4⅝ in.
Volume	4.25 cu ft
Gross weight	157.5 lb
Ship tons	0.11

References: SNL F-358, TM 9-6055.

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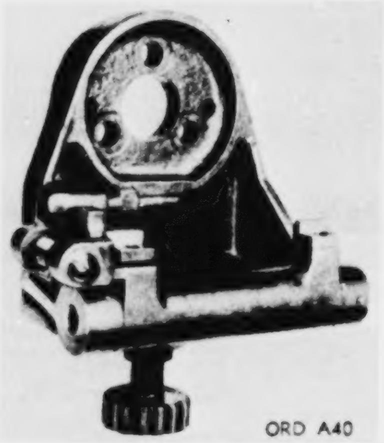
MOUNT, QUADRANT: M1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M1	....	1290-757-8403

General

MOUNT, QUADRANT: M1, is used in conjunction with the QUADRANT, FIRE CONTROL: M1 for laying the gun in elevation. The bracket of the quadrant mount M1 is firmly attached to the right-hand trunnion. Two shoes on the mount form the mounting surface for the feet of the gunner's quadrant. A cross-level knob, and worm gear segment provide means of cross-leveling the mount until the bubble in the cross-leveling vial is centered, insuring that elevation and depression angles will be measured in a true vertical plane. The LIGHT, INSTRUMENT: M12, furnished as equipment for the mount, provides illumination of the level bubble for night operation and also includes a hand light for general use around the mount. A standard flashlight battery, type BA-30, supplies power for the lamps at 1.5 volts.

The quadrant mount M1 is used with the following: Gun, 155-mm, M2A1; Carriage gun, 155-mm, M1; Howitzer, 8-inch, M2; Carriage, howitzer, 8-inch, M1; and Launcher, 762-mm rocket, truck mounted, M289.

Differences among models

Data plate location

The identification plate is located on the bracket.

Classification: Standard A.

CHARACTERISTICS

Weight	13.5 lb
Length	9⅝ in.
Width	8⅝ in.
Height	5¹⁵⁄₁₆ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-205-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 quadrant mounts per shipping container

Length	2 ft, 1½ in.
Width	1 ft, 8⅝ in.
Height	1 ft, 1 in.
Volume	4 cu ft
Gross weight	136 lb
Ship tons	0.10

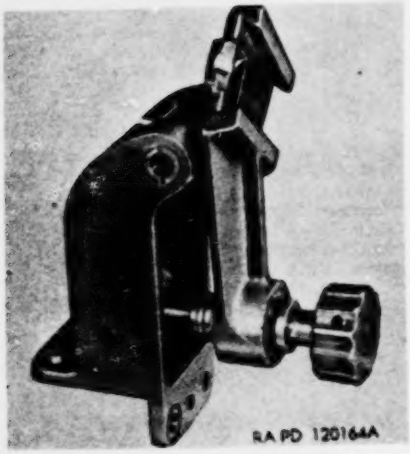
Outside Continental United States

Shipped 6 quadrant mounts per shipping container

Length	2 ft, 1½ in.
Width	1 ft, 8⅝ in.
Height	1 ft, 1 in.
Volume	4 cu ft
Gross weight	136 lb
Ship tons	0.10

References: SNL F-180, TM 9-1818.

MOUNT, SIGHT: M86 (T155)


RA PD 120164A

Model	*Line item No.*	*Federal stock No.*
M86 (T155)	----------------	1290-764-8430

General

MOUNT, SIGHT: M86 (T155), consists of a bracket, a 45° dovetailed support for mounting the MOUNT, TELESCOPE: M79, and a cross leveling knob. The dovetailed support pivots from the top of the sight mount bracket and can be varied in cross level by the cross leveling knob.

Sight mount M86 (T155) is used with the RIFLE, 105-MILLIMETER: M27A1.

Differences among models

Data plate location

The identification plate is located on the side of the bracket.

Classification: Limited Standard C (OTCM 33410).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL C-77.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

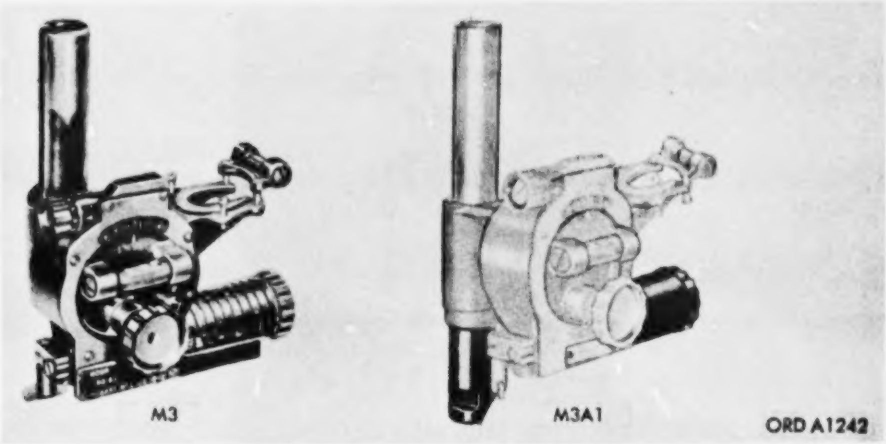
Shipped sight mounts per box
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons -------------------------------------

Outside Continental United States

Shipped sight mount per box
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons -------------------------------------

References: SNL F-354, TM 9-329, TM 9-1619.

MOUNT, TELESCOPE: M3 AND M3A1



Model	*Secondary item Line item No.*	*Federal stock No.*
M3		
M3A1		1290-759-7736

General

MOUNT, TELESCOPE: M3 and M3A1, is of the azimuth compensating type which automatically applies the necessary corrections in azimuth and elevation for trunnion cant. It comes complete with a canvas COVER, TELESCOPE AND MOUNT: M410, for use with the mount and with TELESCOPE, PANORAMIC: M1 to protect either instrument from dust, dirt, moisture, and direct rays of the sun. Rotation of the angle of site micrometer knob, which is attached to the angle of site worm, elevates or depresees the level vial. The angle of site scale and associated micrometer indicate the angle of site in mils. The 300-mil setting on the angle of site scale corresponds to the normal or horizontal angle of sight. The angle of site level vial provides the means for transferring the quadrant elevation from the mount to the weapon. When the cross level worm knob is rotated the mount tilts about the mount bracket. The cross leveled position is indicated by the cross level vial. Instrument lights illuminate the telescope, mount, and adapter.

The telescope mounts M3 and M3A1 are used with TELESCOPE, PANORAMIC: M1 or with TELESCOPE, ELBOW: M62, and ADAPTER, TELESCOPE: M9.

Differences among models

The mounts are identical with the exception that the elevating mechanism of the M3A1 provides for an elevation up to 1,200 mils instead of 800 mils, and the range drum has been eliminated. The telescope mount M3 is to be converted to the M3A1 and the M3 will thereafter become obsolete.

Data plate location

The identification plate is located on the retaining plate.

Classification:

M3	Standard C (OTCM 37255)
M3A1	Standard A

CHARACTERISTICS

Elevation scale:	
M3	0 to 800 mils
M3A1	0 to 1,200 mils
Angle of site scale	0 to 600 mils
Length:	
M3	
M3A1	7 in.
Width:	
M3	
M3A1	5 in.
Height:	
M3	
M3A1	8 in.
Weight:	
M3	
M3A1	26 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 mounts per box (w/equipment)

Length	2 ft
Width	1 ft, 8 in.
Height	1 ft, 2 in.
Volume	3.9 cu ft
Gross weight	180 lb
Ship tons	0.10

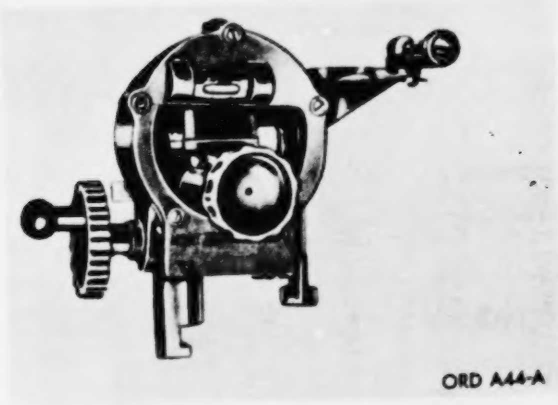
Outside Continental United States

Shipped mounts per box (w/equipment)

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Reference: SNL F-106, TM 9-6103, TM 9-1290-255-35P, TM 9-1545.

MOUNT, TELESCOPE: M16A1



ORD A44-A

Model	*Line item No.*	*Federal stock No.*
M16A1		1290-759-7737

General

MOUNT, TELESCOPE: M16A1, is of the azimuth compensating type, automatically correcting the error when the piece is elevated with the trunnions out of level. The telescope is elevated or depressed by means of the elevating mechanism within the telescope mount housing. The elevating worm meshes with the gear teeth on the outside of the cross level worm housing and, as the worm is revolved, it rotates the housing to elevate or depress the telescope. Rotation of the cross-level knob tilts the mount about the support pivot. The mount bracket is pinned to the support which is positioned on the gun cradle. Instrument lights illuminate the telescope and mount.

The telescope mount M16A1 is used to support TELESCOPE, PANORAMIC: M1 or TELESCOPE, ELBOW: M62 for aiming the howitzer in azimuth.

Differences among models

Data plate location

The identification plate is located on the angle of site level assembly plate.

Classification: Standard C (OTCM 37107).

CHARACTERISTICS

Elevation scale ---------- 0 to 1,200 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

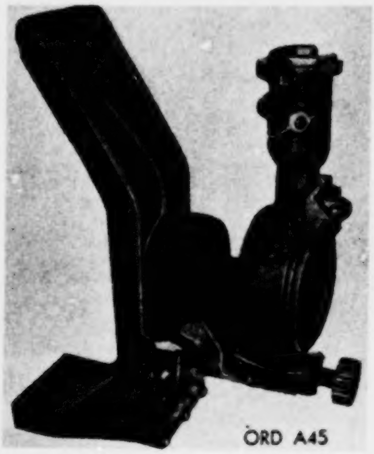
Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F-169, TM 9-1545.

MOUNT, TELESCOPE: M18A1



Model	*Secondary item Line item No.*	*Federal stock No.*
M18A1		1290-757-8402

General

MOUNT, TELESCOPE: M18A1 is used with TELESCOPE, PANORAMIC: M12A7C on CARRIAGE, 155-MM GUN: M1, for CANNON, 155-MILLIMETER GUN: M2 and M2A1, and on CARRIAGE, 8-INCH HOWITZER: M1, for CANNON, 8-INCH HOWITZER: M2 or M2A1. This mount, consists of a socket which supports the panoramic telescope, a longitudinal leveling mechanism, a cross leveling mechanism, and an azimuth compensating mechanism, which automatically corrects azimuth error caused when the weapon is elevated with trunnions out of level. The longitudinal mechanism actuates a rocker that is keyed to an actuating arm assembly which is geared to the body of the mount. Movement of the mount is recorded on the longitudinal and cross level vials. There is no angle of site mechanism. There are no scales or micrometers on this mount for setting azimuth or elevation angles. LIGHT, INSTRUMENT: M19 is used with the mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the housing.

Classification: Standard.

CHARACTERISTICS

Length

Width

Height

Weight

Limits of operation:

Elevation	1137.12 mils of arc
Cross level	533.40 mils of arc

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-3004

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per wood box

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped 1 mount per wood box

Length

Width

Height

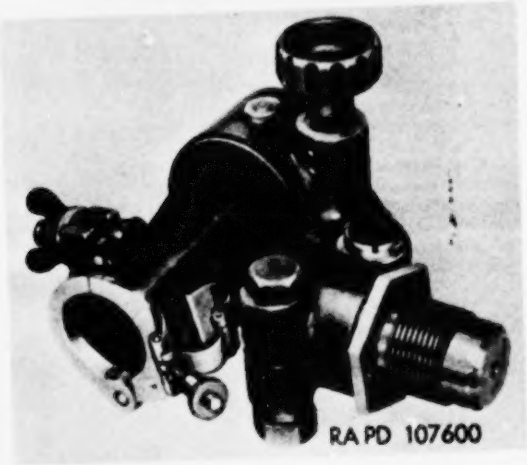
Volume

Gross weight

Ship tons

References: TM 9-6103, TM 9-1545, TM 9-1290-254-35P.

MOUNT, TELESCOPE: M23



Secondary item

Model	Line item No.	Federal stock No.
M23		1290-757-8441
M23 w/e		1290-673-4467

General

MOUNT, TELESCOPE: M23, is used with TELESCOPE, ELBOW: M16A1C or M16A1D on CARRIAGE HOWITZER: M2A2, for CANNON, 105 MILLIMETER HOWITZER: M2A2. This mount is for laying the piece in elevation for direct fire. It consists of a support, rotating bracket assembly, and pertaining parts. The support performs two functions: it is the means by which the mount is attached in the using position onto the right side of the howitzer and is also the elevation worm gear by which the mount is moved in elevation. This mount has provision for threading to a range quadrant. The threaded end of the mount is for assembly to the mounting bracket of QUADRANT, FIRE CONTROL: range: M4A1 or MOUNT, TELESCOPE: M50. The housing contains the elevation adjusting worm and forms the mount for the rotating bracket which holds the telescope. The mounting bracket supports the mount. The elbow telescope is held by the telescope holder. LIGHT, INSTRUMENT: M36 is used with the mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the telescope bracket plug.

Classification: Standard A (OTCM 16754).

CHARACTERISTICS

Length	6⅛ in.
Width	6⅛ in.
Height	4⅝ in.
Weight	6.67 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-325.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

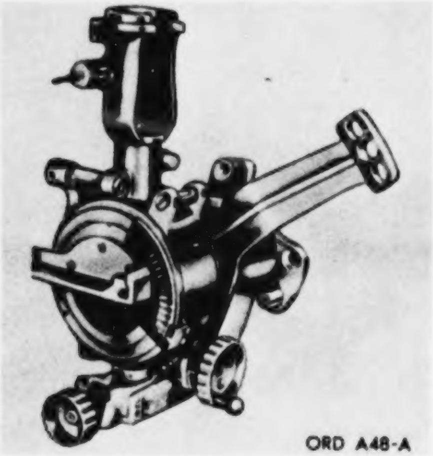
Shipped 24 mounts per shipping container	
Length	2 ft, ⅝ in.
Width	1 ft, 9⅝ in.
Height	1 ft, 3½ in.
Volume	4.82 cu ft
Gross weight	200 lb
Ship tons	0.12
Shipped 20 mounts, w/instrument light M36, per shipping container	
Length	2 ft, 6 in.
Width	1 ft, 6¼ in.
Height	1 ft, 2⅝ in.
Volume	4.68 cu ft
Gross weight	195.65 lb
Ship tons	0.12

Outside Continental United States

Shipped 24 mounts per shipping container	
Length	2 ft, ⅝ in.
Width	1 ft, 9⅝ in.
Height	1 ft, 3½ in.
Volume	4.82 cu ft
Gross weight	200 lb
Ship tons	0.12
Shipped 20 mounts, w/instrument light M36, per shipping container	
Length	2 ft, 6 in.
Width	1 ft, 6¼ in.
Height	1 ft, 2⅝ in.
Volume	4.68 cu ft
Gross weight	195.65 lb
Ship tons	0.12

References: SNL F-197, section 2; TM 9-6101; TM 9-1546.

MOUNT, TELESCOPE: M25 (T29)


ORD A48-A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M25 (T29)		1290-757-8429

General

MOUNT, TELESCOPE: M25 (T29) is used with TELESCOPE, PANORAMIC: M12A7C, or M12A7G on CARRIAGE, 155 MILLIMETER HOWITZER: M1A1 or M1A2 for CANNON, 155 MILLIMETER HOWITZER: M1 or M1A1. This mount is used for laying the weapon in elevation for direct or indirect fire. It is of the azimuth compensating type. It consists of a cross leveling mechanism, an elevating mechanism, an actuating arm with bracket, and a socket for the panoramic telescope. The mount tilts about the pivot in the mount actuating arm when the cross leveling knob is rotated. The elevating mechanism is actuated by the elevating worm (longitudinal leveling worm). The actuating arm bracket supports the pivot for the cross-leveling mechanism. An alining bracket is provided for use of a gunner's quadrant in checking elevation. The mount has cross-leveling and elevation scales. It has no angle of site mechanism. LIGHT, INSTRUMENT: M34 is used with the mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the rocker at a point below the longitudinal leveling worm knob.

Classification: Standard.

CHARACTERISTICS

Length	1 ft, 3⅛ in.
Width	1 ft
Height	11⅛ in.
Weight	48.5 lb
Limits of Operation:	
Elevation	0 to 1,100 mils
Cross level	533.40 mils of arc

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-331A.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per shipping container

Length	1 ft, 7⅝ in.
Width	1 ft, 2¼ in.
Height	1 ft, 2⅝ in.
Volume	2.38 cu ft
Gross weight	53 lb
Ship tons	0.06

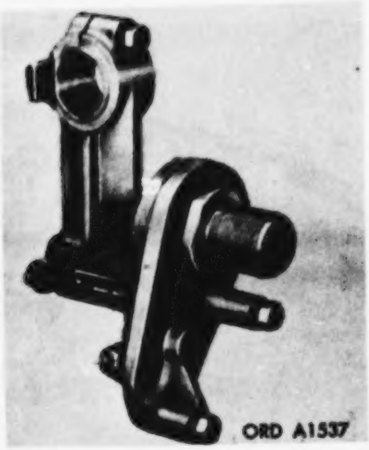
Outside Continental United States

Shipped 1 mount per shipping container

Length	1 ft, 7⅝ in.
Width	1 ft, 2¼ in.
Height	1 ft, 2⅝ in.
Volume	2.38 cu ft
Gross weight	53 lb
Ship tons	0.06

References: SNL F-261, TM 9-6103, TM 9-1545.

MOUNT, TELESCOPE: M42



Model	*Line item No.*	*Federal stock No.*
M42 ----------------------	--------------	1290-757-9942
M42 w/e ----------------	--------------	1290-678-4486

General

MOUNT, TELESCOPE: M42, is used with TELESCOPE, ELBOW: M16A1C QUADRANT, FIRE CONTROL: range, M4 or M4A1, is threaded to the mount so that it positions the elbow telescope between the quadrant and the howitzer. This prevents interference with the line of sight by part of the antiaircraft machinegun mount. This telescope mount is used for laying the howitzer in elevation for direct fire. LIGHT, INSTRUMENT: M36, is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the telescope holder adjusting bracket.

Classification: Standard (OTCM 22792).

CHARACTERISTICS

Length --
Width ---
Height --
Weight --

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

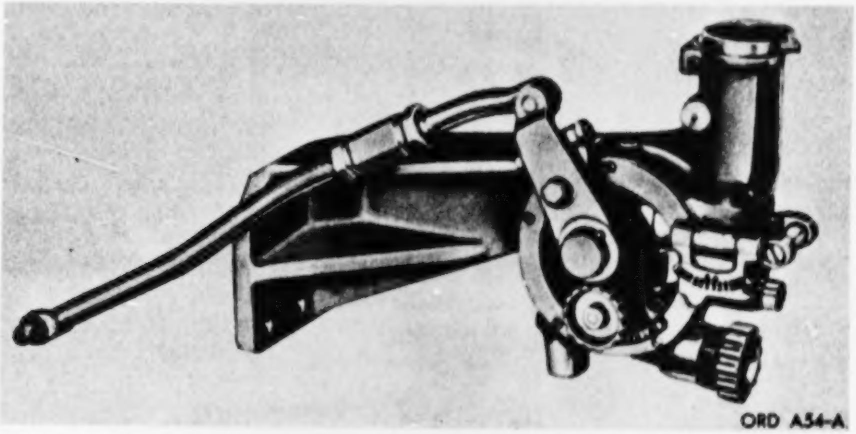
Shipped mount per wood box
Length --
Width ---
Height --
Volume ---
Gross weight ---------------------------------------
Ship tons --

Outside Continental United States

Shipped mount per wood box
Length --
Width ---
Height --
Volume ---
Gross weight ---------------------------------------
Ship tons --

References: SNL F-256, TM 9-6101.

MOUNT, TELESCOPE: M44A1



ORD A54-A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M44A1		1290–759–7738

General

MOUNT, TELESCOPE: M44A1, is used with TELESCOPE, PANORAMIC: M12A7F. This mount traverses with the howitzer carriage. A link assembly transmits motion of the howitzer in elevation to the telescope mount. For indirect laying, angle of elevation is set on the elevation scale. Angle of site is added or subtracted on the angle of site scale, or quadrant elevation, including angle of site, is set on the elevation scale. Laying in azimuth and determining lead in direction are achieved with the panoramic telescope scales in conjunction with the reticle graduations. This mount has a micrometer on the elevating mechanism; it does not have a range drum. LIGHT, INSTRUMENT: M31 is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the body of the mount.

Classification: Standard (OTCM 27467).

CHARACTERISTICS

Length	
Width	
Height	
Weight	
Limit of operation:	
Elevation	0 to 700 mils
Limit of operation—Continued	
Angle of site	0 to 600 mils
Cross level	675.64 mils of arc

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	mount per wood box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	mount per wood box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F–271, TM 9–6103.

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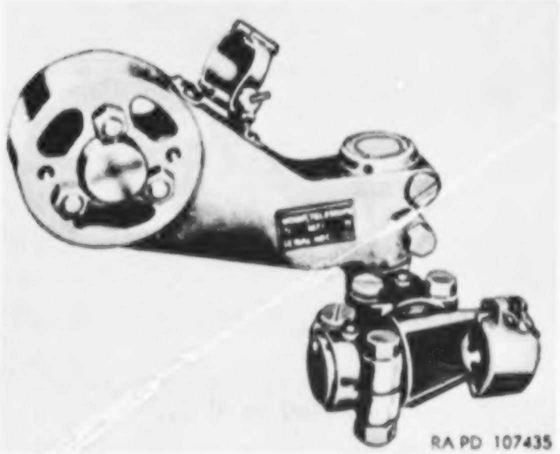
MOUNT, TELESCOPE: M71



	Secondary item	
Model	***Line item No.***	***Federal stock No.***
M71 ----------------------	--------------	1290–759–7741

General

MOUNT, TELESCOPE: M71 is used with TELESCOPE, ELBOW: M16A1F on CARRIAGE, 155 MILLIMETER GUN: M1 for CANNON, 155-MILLIMETER GUN: M2 or M2A1 and wth TELESCOPE, ELBOW: M16A1G on CARRIAGE, 8-INCH HOWITZER: M1 for CANNON, 8-INCH HOWITZER: M2 or M2A1 for laying the gun in elevation. The telescope mount M71 is attached to the rear of the right gun trunnion, and moves with the gun. The mount supports the elbow telescope on locating surfaces, and secures it in position with a clamp and associated eyebolt. Provision is made for rotating the elbow telescope about its objective axis in order to level the reticle pattern. Vertical and lateral adjusting mechanisms are provided for making the boresighting adjustments. There are no scales for recording the adjustments. An instrument light clamp which is secured to the mounting bracket of the mount, holds the instrument light for illuminating the telescope reticle. LIGHT, INSTRUMENT: M36 is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the side of the mounting bracket.

Classification: Standard A (OTCM 27994).

CHARACTERISTICS

Length --
Width --
Height --
Weight --

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-3004.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Domestic Pack

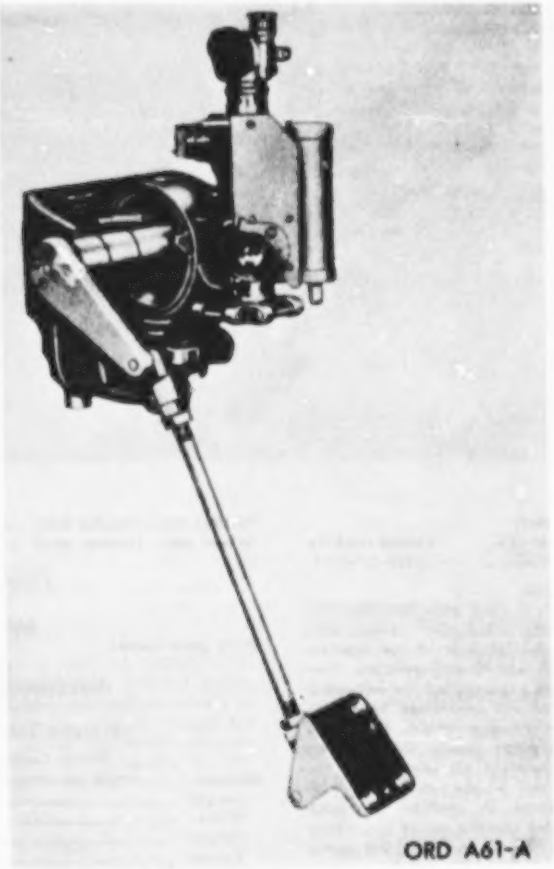
Shipped mount per wood box
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped mount per wood box
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL F–376, TM 9–6101.

MOUNT. TELESCOPE: M76 (T140)



ORD A61-A

Model	*Line item No.*	*Federal stock No.*
M76 (T140)		1290-673-4643

General

MOUNT, TELESCOPE: M76 (T140), is used with TELESCOPE, PANORAMIC: M12A7C on HOWITZER, LIGHT SELF-PROPELLED: 105-mm, M37. Telescope mount M76 is an azimuth compensating mount. It is attached to the shield on the left side of the howitzer carriage, and connected to the left howitzer trunnion by a linkage. Keeping the mount cross leveled during operation insures the correct measuring of azimuth angles when the howitzer is elevated with the trunnions out of level. There are no scales or micrometer on this mount, azimuth being measured on the azimuth scale and micrometer of the panoramic telescope. The telescope socket which supports the panoramic telescope has a locking mechanism to lock the position of the retaining shaft and thereby holds the telescope securely in place. LIGHT, INSTRUMENT: M19, is used with this amount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the actuating shaft bracket.

Classification: Standard A.

CHARACTERISTICS

Length ....
Width ....
Height ....
Weight ....

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

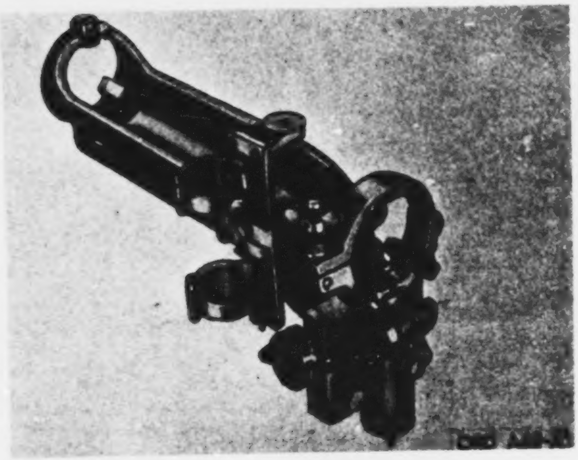
Shipped mount per wood box
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped mount per wood box
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References: SNL F-197, TM 9–6103.

MOUNT, TELESCOPE: M77 (T95)



Model	*Secondary item*	*Line item No.*	*Federal stock No.*
M77 (T95)	----------------	--------------	1290-759-7744

General

MOUNT, TELESCOPE: M77 (T95). is used with TELESCOPE: M76G on HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, M37. The telescope mount is attached to the left side of the howitzer mount and moves with the howitzer in azimuth and elevation. Vertical and lateral adjusting mechanisms are provided for boresighting. Azimuth and elevation deflections are determined by aiming with the required graduation of the telescope reticle. Front and rear locating surfaces support the telescope, and a slot to receive a lug on the rear telescope collar positions the telescope in the mount. A spring loaded plunger, and a telescope clamp with associated eyebolt secure the telescope in position. A lamp bracket with two clamps and associated eyebolts secure the instrument light. LIGHT, INSTRUMENT: M33, is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the mounting bracket.

Classification: Standard A.

CHARACTERISTICS

Length --
Width --
Height --
Weight --
Vertical scale (approx mils) -------------------- EL 50-0-20 DEP
Lateral scale (approx mils) ------------------------R 20-0-20 L

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

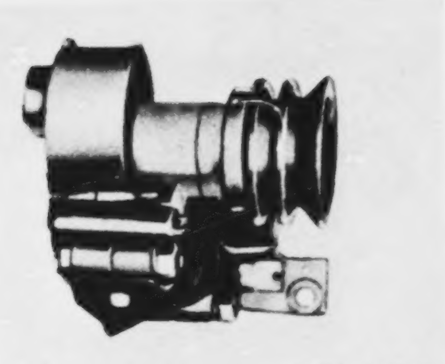
Shipped mount per wood box
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons --

Outside Continental United States

Shipped mount per wood box
Length --
Width --
Height --
Volume --
Gross weight ----------------------------------
Ship tons --

References: SNL F-294, TM 9-6099.

MOUNT, TELESCOPE: M78 (T103)



ORD A63-A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M78 (T103)		1290-757-9956

General

MOUNT, TELESCOPE: M78 (T103), is used with TELESCOPE: M85C, on RIFLE, ANTITANK, 75 MILLIMETER: M20 and M21E1. for direct fire. The mount is secured to a sight mount bracket on the left side of the rifle, and moves with the rifle. A dovetail slot in the mount engages the telescope. Vertical and lateral adjusting mechanisms are provided for boresighting the instrument. LIGHT, INSTRUMENT: M36, is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is the telescope holder bracket.

Classification: Limited Standard (OTCM 28547).

CHARACTERISTICS

Length	6 7/16 in.
Width	4 11/16 in.
Height	4 in.
Weight	3.23 lb
Limits of Operation:	
Elevation	No limit
Azimuth	No limit

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL C-74

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 32 mounts per shipping container

Length	2 ft
Width	1 ft, 7⅛ in.
Height	1 ft, 3⅝ in.
Volume	4.2 cu ft
Gross weight	145 lb
Ship tons	0.11

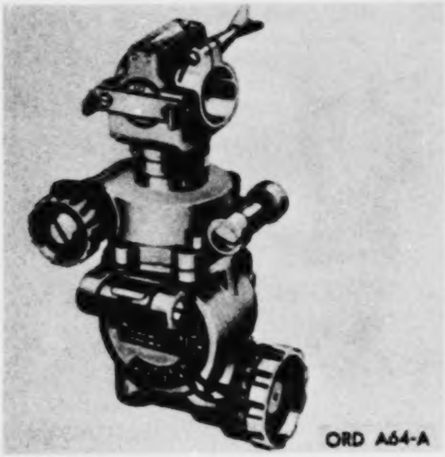
Outside Continental United States

Shipped 32 mounts per shipping container

Length	2 ft
Width	1 ft, 7⅛ in.
Height	1 ft, 3⅝ in.
Volume	4.2 cu ft
Gross weight	145 lb
Ship tons	0.11

References: SNL F-310, TM 9-1546-4.

MOUNT, TELESCOPE: M79 (T148)



ORD A64-A

Model	*Line item No.*	*Federal stock No.*
M79 (T148)	....	1290-795-7745

General

MOUNT, TELESCOPE: M79 (T148), as a component of SIGHTUNIT: M34 or M34A1, is used with MORTAR, INFANTRY, 4.2-INCH: M30, and RIFLE, 106 MILLIMETER: M27 or M27A1. As a component of SIGHTUNIT: M34A2, this mount is used with MORTAR, INFANTRY, 81 MILLIMETER: M29; with MORTAR, 4.2-INCH, SP, full-tracked, M84; with LAUNCHER, ROCKET: multiple. 4.5-inch, M21; and with RIFLE, 75 MILLIMETER: M20. As a component of SIGHTUNIT: M34A2C, this mount is used with LAUNCHER, ROCKET: 318-mm, XM34. The mount has an elevating mechanism, scale and micrometer for measuring and registering angles. A cross level is provided for indicating when the mount is cross leveled, and a longitudinal level indicates when the weapon is elevated to the height indicated on the elevation scale. LIGHT, INSTRUMENT: M42, is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the left side of the mount.

Classification: Limited standard (OTCM 37284).

CHARACTERISTICS

Length ....
Width ....
Height ....
Weight ....
Elevation scale .... −200 to +800 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

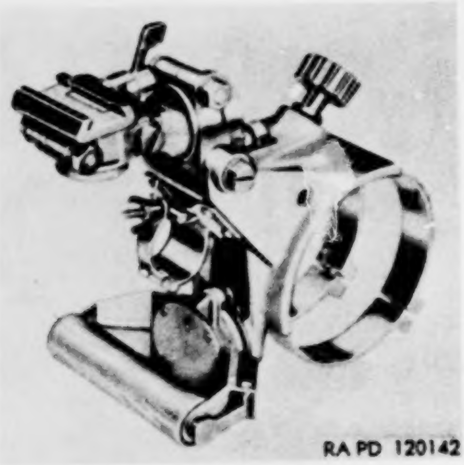
Shipped mount per wood box
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped mount per wood box
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-323, TM 9-1546-4, TM 9-1290-204-35P, TM 9-1240-298-35.

MOUNT, TELESCOPE: M85 (T158)



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Secondary item

Model	*Line item No.*	*Federal stock No.*
M85 (T158)		1290-764-8431

General

MOUNT, TELESCOPE: M85 (T158), consists of the mounting bracket or cylindrical clamp which engages the barrel of the rifle and is provided with clamping screws; a cross leveling mechanism provided with a cross leveling knob and level vial; boresighting adjustment consisting of an elevation worm and an azimuth worm; telescope holder with a dovetailed slot to receive the dovetail on the telescope and with a clamping lever; instrument light clamp to hold instrument light M36; and a handle assembly to actuate the firing mechanism of the gun.

Telescope mount M85 (T158) clamps on the barrel of RIFLE, 105 MILLIMETER: M27A1 and supports, TELESCOPE: M90C, M90D, or M90F* or TELESCOPE: M94 (T167)* in its holder.

Differences among models

Data plate location

The identification plate is located on the side of the bracket.

Classification: Standard C (OTCM 37119).

CHARACTERISTICS

PERFORMANCE

* For characteristics and data, see item in section 14.

EQUIPMENT

Basic issue items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

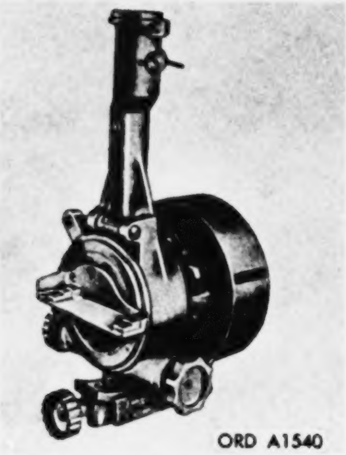
Shipped telescope mount per box
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped telescope mount per box
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

References: SNL F-353, TM 9-329, TM 9-1614.

MOUNT, TELESCOPE: M95 (T190)



ORD A1540

Secondary item

Model	*Line item No.*	*Federal stock No.*
M95 (T190)		1290-344-4634

General

MOUNT, TELESCOPE: M95 (T190), is used with TELESCOPE, PANORAMIC: M12A7K, on HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, M44, for laying direct or indirect fire. This mount is of the azimuth compensating type (compensation for trunnion cant). The mount is attached to the right trunnion hub of the howitzer. The mount is verticalized by turning the cross leveling knob and the elevation knob until the level bubbles are centralized. LIGHT, INSTRUMENT: M34 is used with this mount for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is on the rocker.

Classification: Standard A (OTCM (35068).

CHARACTERISTICS

Length	1 ft, 6⅝ in.
Width	9¼ in.
Height	9½ in.
Weight	56.5 lb
Elevation Scale:	
Smallest graduated interval	100 mils
Angular range of scale	0 to 1,100 mils
Micrometer:	
Smallest graduated interval	1 mil
Angle of mount body subtended for revolution of micrometer	100 mils
Cross leveling knob:	
Rotation between limits	9¼ turns

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7004.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mount per shipping container

Length	2 ft, ⅝ in.
Width	1 ft, 2 in.
Height	1 ft, 1¼ in.
Volume	2.7 cu ft
Gross weight	95 lb
Ship tons	0.07

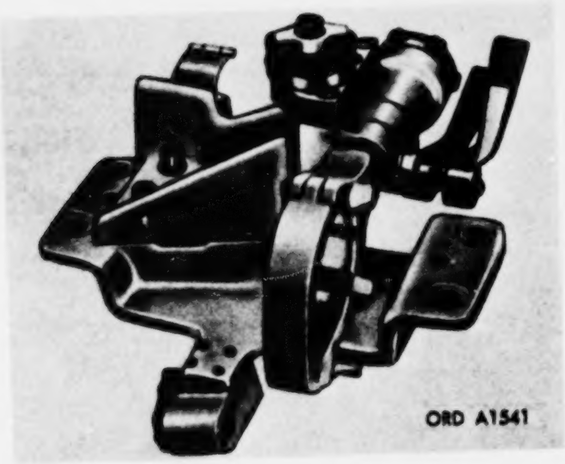
Outside Continental United States

Shipped 1 mount per shipping container

Length	2 ft, ⅝ in.
Width	1 ft, 2 in.
Height	1 ft, 1¼ in.
Volume	2.7 cu ft
Gross weight	95 lb
Ship tons	0.07

References: SNL F-216, TM 9-6148.

MOUNT, TELESCOPE: M103 (T191)



Model	***Line item No.***	***Federal stock No.***
M103		1290–344–4676

General

MOUNT, TELESCOPE: M103 (T191), is used with TELESCOPE: M97C on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A1, and M48C. It is mounted on the right side, parallel to the line of sight of the 90-mm gun and used in direct fire operation of that weapon. The mount consists of a holder assembly containing a spherical mounting surface which clamps and positions the telescope. The mount also contains a clamp assembly that supports the instrument light M36, which illuminates the reticle of the adtelescope M97C. An azimuth adjusting knob and an elevation adjusting knob graduated to one-quarter mil provide 4 mils of azimuth and elevation adjustments. Azimuth and elevation locking levers clamp the adjusting knobs in any position. These levers are properly labled "AZIMUTH" and "ELEVATION."

Differences among models

Data plate location

The identification plate (nameplate) is on the azimuth and elevation housing.

Classification: Standard A.

CHARACTERISTICS

Length	11 7/16 in.
Width	8⅝ in.
Height	10 11/16 in.
Weight	25± lb
Azimuth adjustment	4.0 mils
Elevation adjustment	4.0 mils

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–7022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped mount per wood box

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped mount per wood box

Length

Width

Height

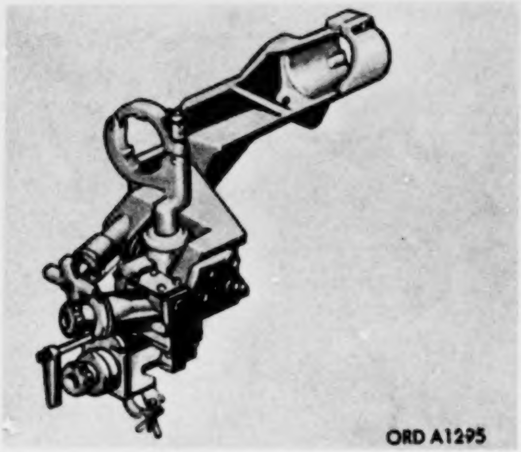
Volume

Gross weight

Ship tons

References: SNL F–385, TM 9–6161.

MOUNT, TELESCOPE: M107 (T209)



ORD A1295

Model	*Secondary item*	*Line item No.*	*Federal stock No.*
M107			1290–621–7914

General

MOUNT, TELESCOPE: M107, is used with TANK, COMBAT, FULL TRACKED: 120-mm gun, M103A1. It consists of a case steel mount assembly attached to MOUNT, GUN: 120-mm, M89A1. This assembly includes a boresighting mechanism bolted and doweled to the mount. The telescope mount rigidly holds the forward section of TELESCOPE: M102 with respect to the 120-mm gun. Provision is made for precise telescope boresight adjustment in elevation and deflection (azimuth).

Differences among models

Data plate location

Classification: Standard A.

CHARACTERISTICS

Length	2 ft, 3 in.
Width	1 ft, 3 in.
Height	8 in.
Weight	75 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–2350–214–10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

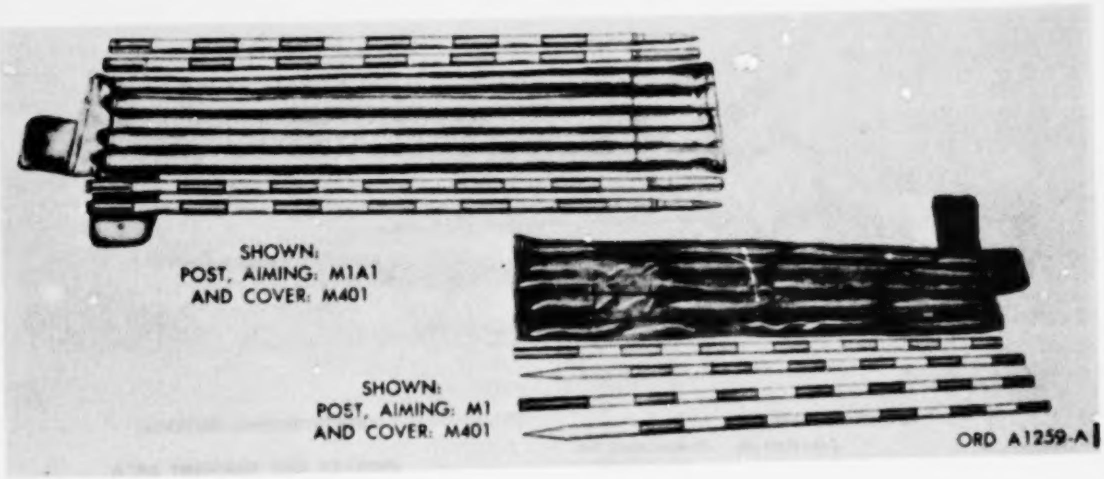
Shipped mounts per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped mounts per
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9–1290–278–35, TM 9–1290–278–35P.

POST, AIMING: M1, M1A1, AND M1A2



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M1		1290-622-4313
M1A1		1290-622-4314
M1A2		1290-535-7617

General

POST, AIMING: M1, M1A1, and M1A2, consists of two tubular metal sections, the upper section being provided with a fitting to mate with the lower section which has the embedding point. These aiming posts are used with most field artillery weapons to provide a suitable reference or zero point when laying the weapon during indirect fire operation. The aiming post tube is painted with alternate white and red stripes 4 inches long. LIGHT, AIMING POST: M41 is used with these aiming posts. The cloth COVER: M401 serves as a carrying case for the disassembled aiming post.

Differences among models

In the method of mating the upper section with the lower section, the M1A2 has the embedding point on both sections.

Data plate location

The identification plate is located on the tube.

Classification:

M1	Limited standard (OTCM 36035).
M1A1	Substitute standard (OTCM 36035).
M1A2	Standard A

CHARACTERISTICS

Length, overall:	
M1	8 ft
M1A1	8 ft
M1A2	8 ft, 6¼ in.
Diameter, tube:	
M1	1⅛ in.
M1A1	1⅛ in.
M1A2	1⅛ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-3064.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

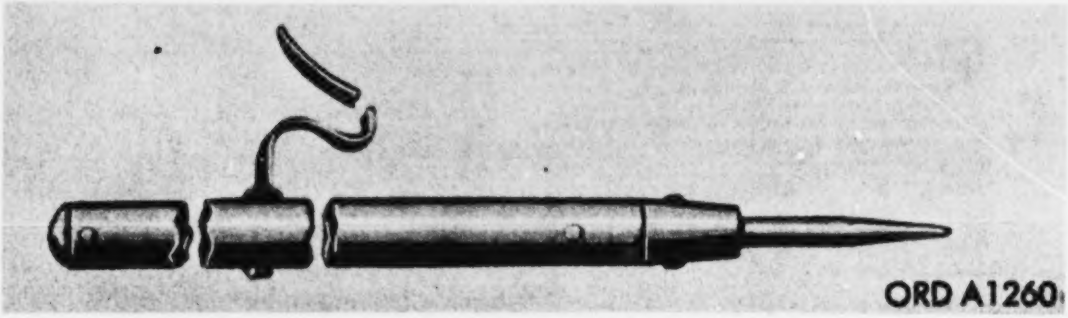
Shipped 24 aiming posts M1 per shipping container	
Length	4 ft, 11¾ in.
Width	1 ft, 3½ in.
Height	1 ft, 2 in.
Volume	7 cu ft
Gross weight	180 lb
Ship tons	0.18
Shipped 30 sets (2 per set) aiming post M1A2 per shipping container	
Length	4 ft, 9½ in.
Width	1 ft, 3¼ in.
Height	1 ft
Volume	6.1 cu ft
Gross weight	180 lb
Ship tons	0.18

Outside Continental United States

Shipped 24 aiming posts M1 per shipping container	
Length	4 ft, 11¾ in.
Width	1 ft, 3½ in.
Height	1 ft, 2 in.
Volume	7 cu ft
Gross weight	180 lb
Ship tons	0.18
Shipped 30 sets (2 per set) aiming post M1A2 per shipping container	
Length	4 ft, 9½ in.
Width	1 ft, 3¼ in.
Height	1 ft
Volume	6.1 cu ft
Gross weight	180 lb
Ship tons	0.18

References: SNL F-35.

POST, AIMING: M4



ORD A1260

Secondary item

Model	*Line item No.*	*Federal stock No.*
M4		1290-556-9067

General

POST, AIMING: M4 consists of metal tubing with a metal embedding point and is used for pack transport only. It provides a suitable reference or zero point when laying 81-mm mortars during indirect fire operation. LIGHT, AIMING POST: M41 is used with the aiming post for night operations.

Differences among models

Data plate location

The identification plate is located on the tube.

Classification: Limited standard.

CHARACTERISTICS

Length	4 ft, 2 in.
Diameter, tube	1¼ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL A-33.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 16 aiming posts per shipping container

Length	4 ft, 8¾ in.
Width	7¼ in.
Height	7½ in.
Volume	1.6 cu ft
Gross weight	58 lb
Ship tons	0.04

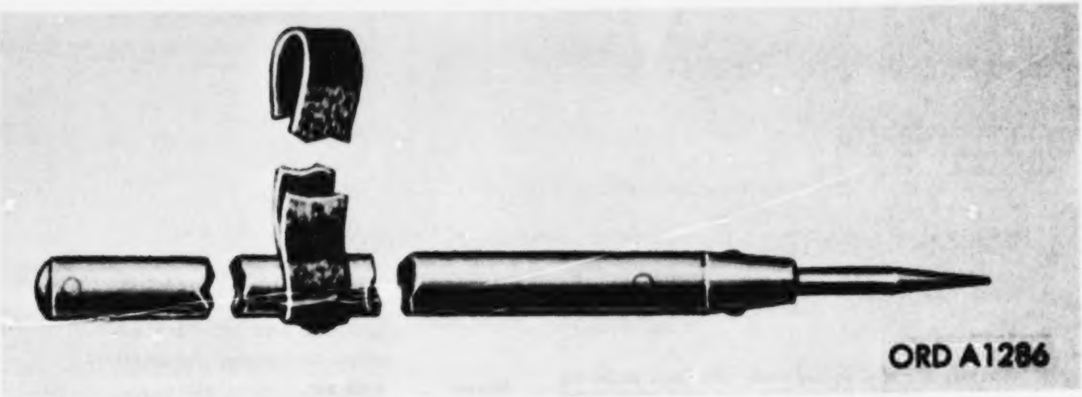
Outside Continental United States

Shipped 16 aiming posts per shipping container

Length	4 ft, 8¾ in.
Width	7¼ in.
Height	7½ in.
Volume	1.6 cu ft
Gross weight	58 lb
Ship tons	0.04

References: SNL F-35.

POST, AIMING: M6



Secondary item

Model	*Line item No.*	*Federal stock No.*
M6		1290-557-2806

General

POST, AIMING: M6 consists of metal tubing with a metal embedding point. It provides a suitable reference or zero point when laying 81-mm mortars during indirect fire operation. LIGHT, AIMING POST: M41 is used with the aiming post for night operation.

Differences among models

Data plate location

The identification plate is located on the tube.

Classification: Standard A.

CHARACTERISTICS

Length	6 ft
Diameter, tube	1⅛ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-3064.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 aiming posts per shipping container

Length	6 ft, 8 in.
Width	1 ft, ⅛ in.
Height	10⅛ in.
Volume	5.95 cu ft
Gross weight	150 lb
Ship tons	0.15

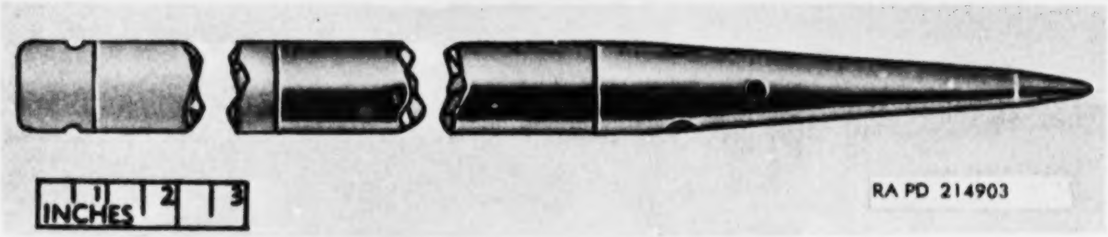
Outside Continental United States

Shipped 20 aiming posts per shipping container

Length	6 ft, 8 in.
Width	1 ft, ⅛ in.
Height	10⅛ in.
Volume	5.95 cu ft
Gross weight	150 lb
Ship tons	0.15

References: SNL F-35, TM 9-3064.

POST, AIMING: M7



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M7	....	1290-557-0618

General

POST, AIMING: M7, is a wooden stake with metal embedding point. It provides a suitable reference or zero point when laying 60-mm and 81-mm mortars during indirect fire operation. LIGHT, AIMING POST: M41 is used with the aiming post for night operation.

Differences among models

Data plate location

Classification: Limited standard.

CHARACTERISTICS

Length	8 ft
Diameter	1¼ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped posts per

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

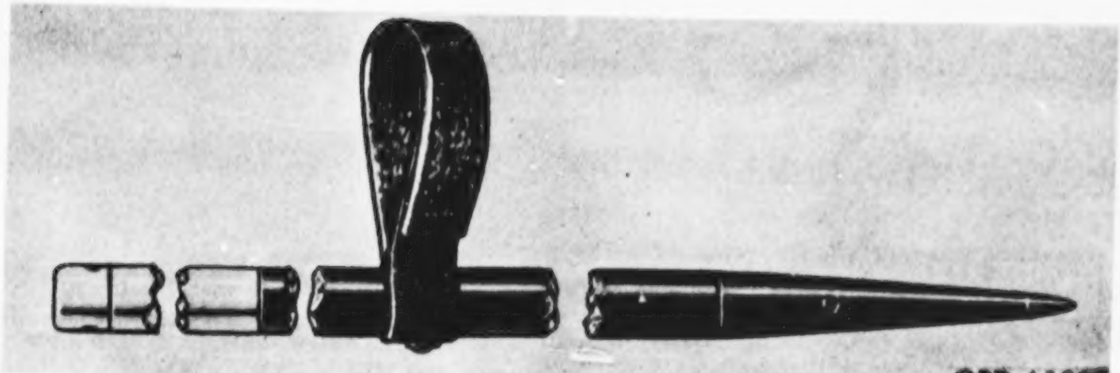
Outside Continental United States

Shipped posts per

Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-35.

POST, AIMING: M8



ORD A1287

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M8	--------------	1290-557-0619

General

POST, AIMING: M8, is a wooden stake with metal embedding point. It provides a suitable reference or zero point when laying 81-mm mortars during indirect fire operation. LIGHT, AIMING POST: M41 is used with the aiming post for night operation.

Differences among models

Data plate location

Classification: Limited Standard.

CHARACTERISTICS

Length	6 ft
Diameter	1¼ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

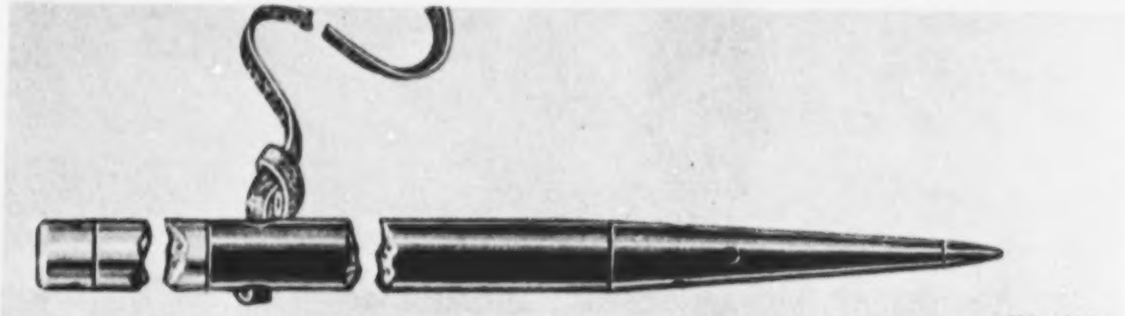
Shipped posts per
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped posts per
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: SNL F-56.

POST, AIMING: M9



ORD A1288

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M9		1290-557-0621

General

POST, AIMING: M9, is a wooden stake with metal embedding point. It provides a suitable reference or zero point when laying 81-mm mortars during indirect fire operation. LIGHT, AIMING POST: M41 is used with the aiming post for night operation.

Differences among models

Data plate location

Classification: Limited Standard.

CHARACTERISTICS

Length ---------- 4 ft, 2 in.
Diameter ---------- 1⅛ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

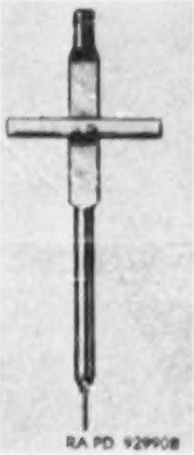
Shipped posts per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped posts per
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

References: SNL F-35.

POST, AIMING: M10



Secondary item

Model	*Line item No.*	*Federal stock No.*
M10		1290-769-2156

General

POST, AIMING: M10, consists of a metal rod with a metal embedding point and a crosspiece alidade and is used when laying 60-mm and 81-mm mortars during indirect fire operation. It provides a suitable reference or zero point when laying the weapon. The alidade is graduated from 100 mils to 0 to 100 mils and can be rotated 90 degrees out of position. LIGHT, AIMING POST: M41 is used with the aiming post for night operation.

Differences among models

Data plate location

The identification plate is located on the tube.

Classification: Limited standard.

CHARACTERISTICS

Length	2 ft, 1⅛ in.
Width, alidade folded	1⅛ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-3064.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 32 aiming posts per shipping container

Length	2 ft, 5⅝ in.
Width	1 ft, 4⅛ in.
Height	9⅛ in.
Volume	2.6 cu ft
Gross weight	68 lb
Ship tons	0.07

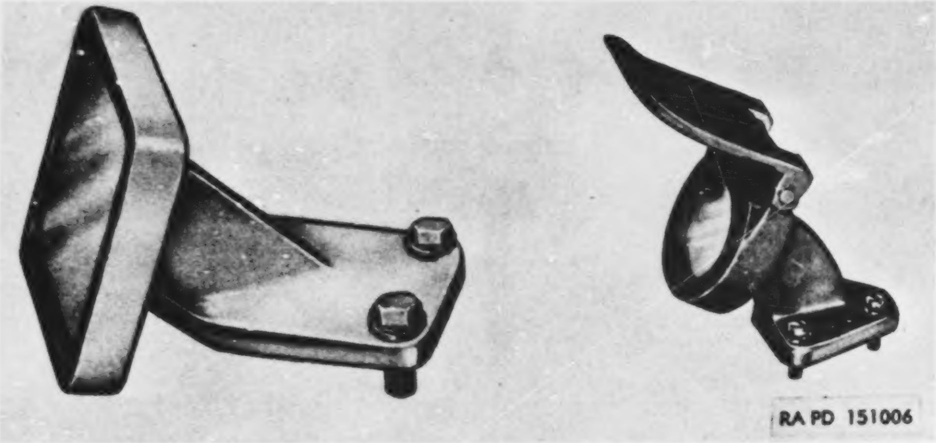
Outside Continental United States

Shipped 32 aiming posts per shipping container

Length	2 ft, 5⅝ in.
Width	1 ft, 4⅛ in.
Height	9⅛ in.
Volume	2.6 cu ft
Gross weight	68 lb
Ship tons	0.07

References: SNL F-35.

PROJECTION-SYSTEM: (ORD No. 7597856)



RA PD 151006

Model	*Line item No.*	*Federal stock No.*
(as above)	....	1290-759-7856

General

PROJECTION-SYSTEM: (ORD No. 7597856) consists of two reflectors (mirrors), upper and lower, strategically located on the turret of TANK, COMBAT, FULL TRACKED: 76-mm gun, M41 or M41A1 and the gunner's PERISCOPE: M20, M20A1, or M20A3 to allow the gunner to view the setting of the ballistic range scale without changing position from the periscope.

Differences among models

Data plate location

Classification: Standard B.

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-201-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

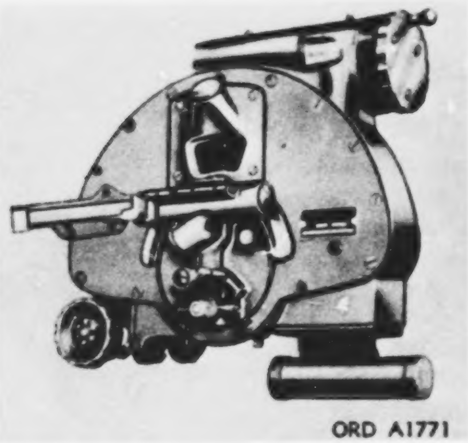
Shipped projection-systems per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped projection-systems per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-368.

QUADRANT, FIRE CONTROL: ELEVATION, M1A1



ORD A1771

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M1A1		1290-546-9561

General

QUADRANT, FIRE CONTROL: elevation, M1A1, is used for laying a weapon in elevation for indirect fire. The desired elevation is set on the quadrant and then the weapon is elevated until the level vials are centered. The elevation quadrant is attached to the adapter on the right gun trunnion. Elevations are indicated on an elevation scale. A longitudinal level indicates when the actual elevation of the gun is the same as that shown on the scale and micrometer. The cross leveling mechanism is provided for keeping the mount cross-leveled. Illumination is provided from the main power source of the weapon.

The elevation fire control quadrant M1A1 is used with CARRIAGE, 8-INCH GUN: M2; CARRIAGE, 155-MILLIMETER GUN: M1; GUN, FIELD, ARTILLERY, SELF-PROPELLED: 155-mm, M53 (T97): GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin, 40-mm, M19A1; and GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin, 40-mm, M42 and M42A1. GUN, HEAVY, MOTORIZED: 280-mm, M65 and GUN ANTI-TANK, SELF-PROPELLED: 90-mm, M56.

Data plate location

The identification plate is located on the case cover.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Elevation scale	−200 to +1,200 mils
Length	1 ft, 2½ in.
Width	8¼ in
Height	1 ft, ¾ in
Weight	75 lb

PERFORMANCE

EQUIPMENT

Associated:

ADAPTER, QUADRANT: M10 (a part of 8-inch gun carriage M2).

COVER, QUADRANT: M427.

Basic Issue Items: See TM 9-2350-213-10.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 30 quadrants w/case carrying, M82 per shipping container.

Length	2 ft, ¾ in.
Width	1 ft, 6¾ in.
Height	1 ft, 4¼ in.
Volume	4.37 cu ft
Gross weight	160 lb
Ship tons	0.10

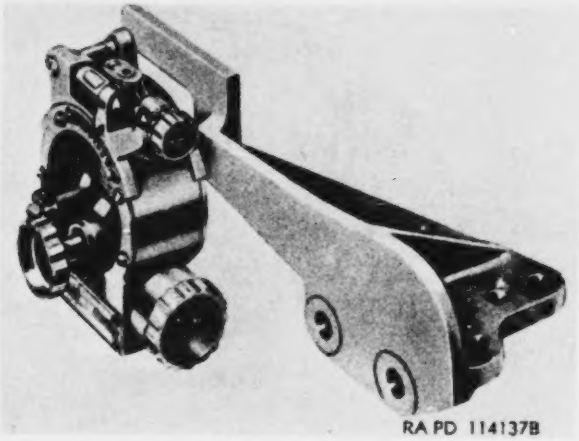
Outside Continental United States

Shipped 30 quadrants w/case carrying, M82 per shipping container.

Length	2 ft, ¾ in.
Width	1 ft, 6¾ in.
Height	1 ft, 4¼ in.
Volume	4.37 cu ft
Gross weight	160 lb
Ship tons	0.10

References: TM 9-1557, TM 9-1290-205-34, TM 9-1290-205-35P.

QUADRANT, FIRE CONTROL: ELEVATION, M12


RA PD 114137B

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M12		1290-759-7759

General

QUADRANT, FIRE CONTROL: elevation, M12, is manually operated and is used to lay a 105-mm howitzer in elevation for indirect fire. It is mounted on the right-hand side of the howitzer mount. The quadrant includes a cross leveling mechanism and a cross level vial. Elevating mechanisms are provided for setting the elevation angle and the angle of site. The longitudinal level indicates when the weapon is elevated to the angle registered on the scale. An instrument light provides illumination of the scales, micrometer, and level vials for night operation.

Differences among models

Data plate location

The identification plate (nameplate) is attached to the eevating worm housing front plate.

Classification: Limited Standard (OTCM 37255).

CHARACTERISTICS

Angle of site scale	0 to 600 mils
Elevation scale	0 to 800 mils
Length	12½ in.
Height	6½ in.
Width	6¼ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-238.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped quadrants per

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Shipped quadrants per

Length

Width

Height

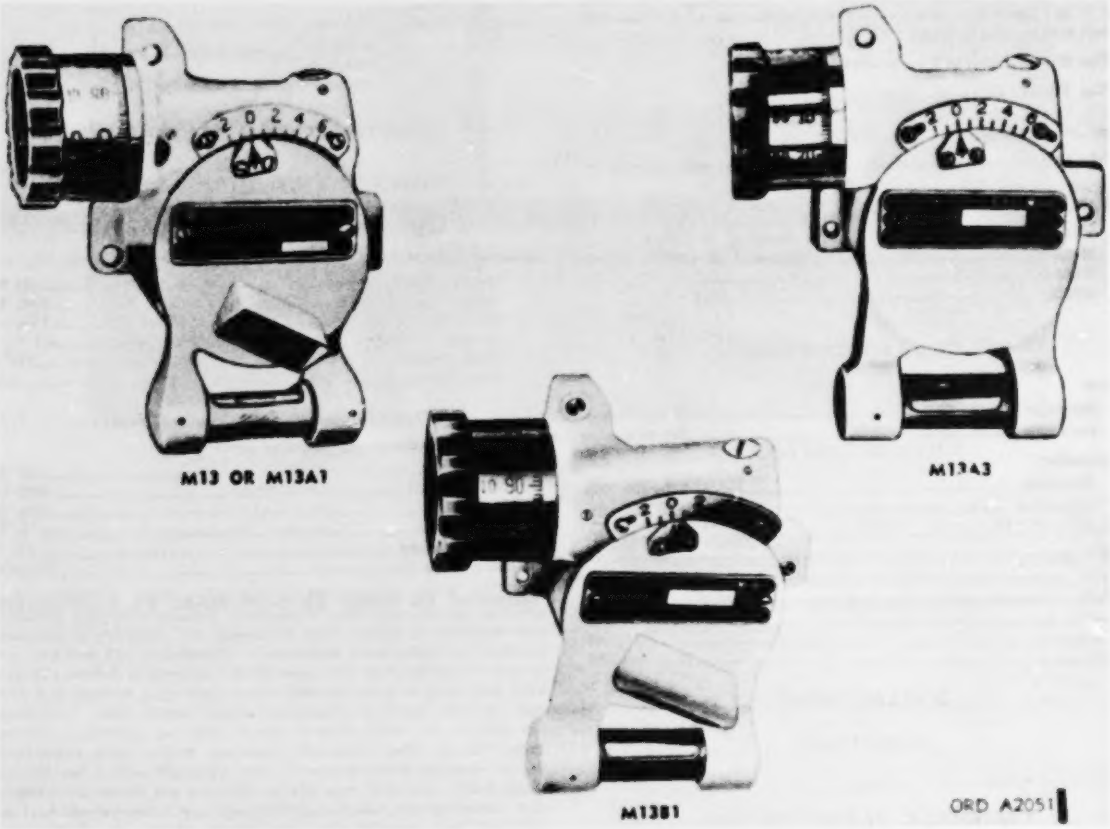
Volume

Gross weight

Ship tons

References: SNL F-169, TM 9-6097.

QUADRANT, FIRE CONTROL: ELEVATION, M13(T21), M13A1, M13A3 (M13A2E1) and M13B1



M13 OR M13A1

M13A3

M13B1

ORD A2051

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M13 (T21)		1290-765-2218
M13A1		1290-703-6262
M13A3		1290-856-9451
M13B1		1290-870-6276

General

QUADRANT, FIRE CONTROL: elevation M13 (T21), M13A1, M13A3 (M13A2E1), or M13B1 is a unit of the indirect fire control system of a tank. It is used with the ballistics drive to set the desired elevation on the gun. It consists of an elevation knob and worm, elevation micrometer, level vial, reflector, and elevation scale. The elevation scale is graduated in 100-mil intervals from minus 200 to pus 600 mils. An elevation knob, with an attached micrometer, is provided to "set in" elevation or depression angles. The micrometer scale is graduated in 1-mil intervals from 0 to 100 mils on two scales, reading in opposite directions, elevation angles being read on the inner scale and depression angles on the outer scale. Turning the elevation knob in setting an elevation or depression angle, will rotate the housing on which the scale index and level vial are mounted, and will displace the bubble from center. When the weapon is elevated or depressed sufficiently to return the bubble to center, it is aimed to the elevation or depression set on the scale, movement of the weapon being transmitted through linkage to the ballistics drive or the gun recoil guard on which the quadrant is mounted. A reflector, set at a 45-degree angle over the level vial tube (except M13A3) allows for easy viewing of the level vial, which is above eye level of tank personnel.

Light, instrument: M30 is used as a source of illimination for the M13A1 (M60 tank).

The M13 quadrant is used with DRIVE, BALLISTICS: M3 on TANK, COMBAT, FULL TRACKED: 90-mm gun, M47 and DRIVE, BALLISTICS: M6, on TANK, COMBAT, FULL TRACKED: 105-mm, M103.

The M13A1 quardant is used with DRIVE, BALLISTICS: M5 * on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48,* M48A1,* and M48C;* with DRIVE, BALLISTICS: M5A1 * and M5A2 * on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2 * and M48A2C * respectively; and with DRIVE, BALLISTICS: M10 * on TANK, COMBAT, FULL TRACKED: 105-mm gun, M60.*

The M13A3 quadrant is used with DRIVE, BALLISTICS: M10A4 on TANK, COMBAT, FULL TRACKED: 105-mm gun, M60A1.

The M13B1 quadrant is used with DRIVE, BALLISTICS: M10B1 on TANK, COMBAT, FULL TRACKED: 90-mm, M48A3.

* For characteristics and data, see item in sections 12 and 23 and on page 18-9.

Differences among models

The models are identical with the exception of minor details in the design. The M13A1 differs from the M13 in that it has an additional level vial eccentric and ring, and its elevating worm shaft has a ball bearing in place of a bearng consisting of a single ball, a ball socket, and ball cap.

The M13A3 does not have a reflector.

The M13B1

Data plate location

The identification plates is located on the worm gear housing.

Classification:

M13	Standard B (OTCM 37119)
M13A1	Standard A (OTCM 37119)
M13A3	
M13B1	

CHARACTERISTICS

Scales:	
Elevation	0 to 600 mils
Depression	200 to 0 mils
Micrometer:	
Elevation	0 to 100 mils
Depression	0 to 100 mils
Length	4½ in.
Width	4⅝ in.
Height	2¼ in.
Weight	1⅝ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: M13—See TM 9-2350-206-12.
M13A1, M13A3 } See TM 9-2350-215-10.
M13B1—See TM 9-2350-224-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 60 quadrants per shipping container.

Length	21 in.
Width	20¼ in.
Height	16½ in.
Volume	4.1 cu ft
Gross weight	170 lb
Ship tons	0.10

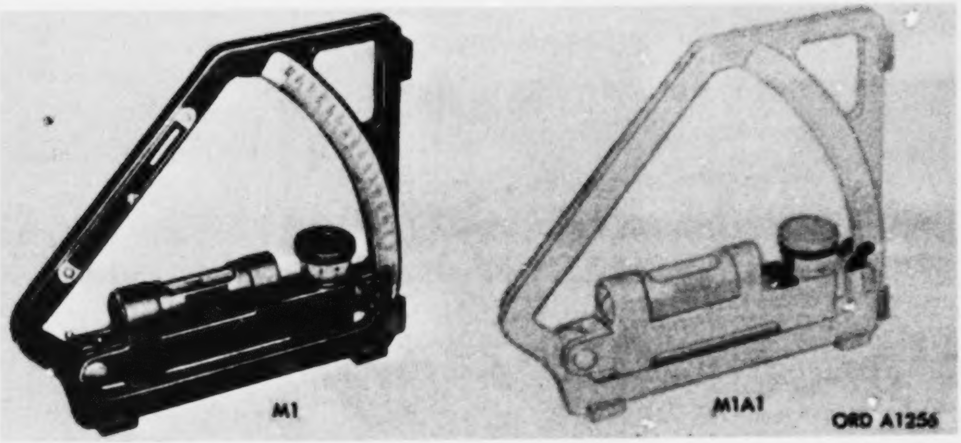
Outside Continental United States

Shipped 60 quadrants per shipping container.

Length	21 in.
Width	20¼ in.
Height	16½ in.
Volume	4.1 cu ft
Gross weight	170 lb
Ship tons	0.10

References: TM 9-6053, TM 9-1290-232-35, TM 9-1290-232-35P.

QUADRANT, FIRE CONTROL: GUNNER'S, M1 AND M1A1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M1		1240-674-0631
M1A1		1290-719-7156

General

QUADRANT, FIRE CONTROL: gunner's M1 or M1A1, is a portable precision leveling instrument used for laying artillery weapons in elevation, for measuring their angles of elevation and for checking the adjustments of elevating mechanisms on sighting and fire control equipment. It consists of a sector-shaped frame to which is pivoted a leveling radial arm carrying a level vial tube assembly. Four frame shoes, arranged in pairs, provide two reference surfaces at right angles to each other for seating the instrument when taking readings. Machined teeth on the inside arc of the frame, engaging with a spring-loaded plunger in the radial arm, permit rapid setting of the arm in coarse 10-mil steps, as read on elevation scales provided on each side of the frame. The left scale is used for elevations from 0 to 800 mils, and the right scale is used for elevations from 800 to 1,600 mils. The leveling radial arm has a micrometer graduated in 0.2 mil steps which provides fine adjustment. By the use of the coarse and fine motions, the level can be set to the required angle. When the level bubble is centered, elevation is read as the sum of the coarse and fine scale readings. An arrow with instructions "LINE OF FIRE" is scribed on the frame to indicate the direction the instrument is to be faced and the correct reference surface for the scale in use. The gunner's fire control quadrant M1 or M1A1 is used with various rifles, guns, gun carriages, self-propelled guns, gun motor carriages, antiaircraft gun mounts, cannons, cannon and carriage transport vehicles, combat tanks, tracked armored landing vehicles, multiple rocket launchers.

Differences among models

The models differ in the design of the radial arm plunger plates. The gunner's fire control quadrant M1A1 differs from M1 in that it has a micrometer mask and a micrometer mask key on the leveling radial arm.

Data plate location

The identification plate is located on the upper frame side surface.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Elevation scales:	
Lower	0 to 800 mils
Upper	800 to 1,600 mils
Limits of Operation:	
Elevation	1,600 mils
Depression	0
Length	6⅞ in.
Width	1$\frac{11}{16}$ in.
Height	6 in.
Weight	1.8 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

For graphic training aids and device, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

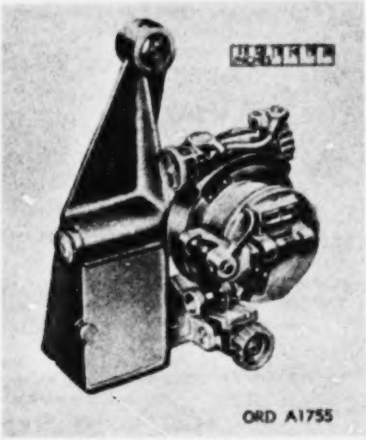
Shipped	12 fire control quadrants per box
Length	2 ft. 6 in.
Width	1 ft. 1 in.
Height	11 in.
Volume	2.3 cu ft
Gross weight	58 lb
Ship tons	0.6

Outside Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-575, TM 9-1527, TM 9-1290-200-35P.

QUADRANT, FIRE CONTROL: RANGE, M4A1



Model	*Secondary item* *Line item No.*	*Federal stock No.*
M4A1		1290–759–7761

General

QUADRANT, FIRE CONTROL: range, M4A1 is a manually operated elevation indicating instrument used for laying howitzers and cannons in elevation for indirect fire. The quadrant is so mounted that any movement of the howitzer in elevation is imparted to the quadrant. It consists of the battery bracket assembly, the longitudinal and cross level vial tube assemblies, cross leveling mechanism assembly, the range elevating mechanism, the angle-of-site mechanism, and a built-in illuminating system which provides illumination of the instrument for night operation. When laying the piece, the required angle of elevation is set on the elevation scale and the longitudinal level vial is tilted, and the howitzer is elevated until the level bubble is centered, thus indicating that the piece is laid to the desired elevation.

The range fire control quadrant M4A1 is used with CANNON, 105-MILLIMETER HOWITZER: M2A2 and CANNON, 75 MILLIMETER GUN: automatic, M35(T83E7) and T83E6.

Differences among models

Data plate location

The identification plate is located on the elevating worm gear assembly housing.

Classification: Standard A (OTCM 27467).

CHARACTERISTICS

Angle of site scale	0–300–600 mils
Adjustable scale	100 mil increments
Worm micrometer	100 1–mil spaces
Elevation scale	0–1,200 mils
Length	10 in.
Width	10 in.
Height	1 ft, 2⅝ in.
Weight	32 lb.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 fire control quadrant per box

Length	20 in.
Width	13 in.
Height	17 in.
Volume	2.6 cu ft
Gross weight	65 lb
Ship tons	0.07

Outside Continental United States

Shipped 1 fire control quadrant per box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–1290–245–35P, TM 9–6097.

REMOTE CONTROL SYSTEM: M2A1

Model	*Line item No.*	*Federal stock No.*
M2A1		1290-570-6584

General

REMOTE CONTROL SYSTEM: M2A1, used with the 90-mm antiaircraft gun mount M1A2, is a combination of mechanical, electrical, and hydraulic units used to position an antiaircraft gun continuously in accordance with data furnished by the antiaircraft fire control system M33C, and transmitted to the gun through a cable system. This remote control system is fully automatic, with provision made for complete manual operation of the gun in an emergency by means of the azimuth and elevating handwheels. The remote control system also provides for intrabattery communication and also for command control of firing of the guns. The remote control system M2A1 consists of two major components: the indicator system M4A1 and the power control M4A1. Cables and conduits connecting the components of the systems are either independent assemblies or part of one of the interconnected major component assemblies.

Components:	*Page*
INDICATOR SYSTEM: M4A1	18–69
CONTROL, POWER: M4A1	18–71

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Hydraulic System:

Operating pressures:	
Replenisher pump	75 psi plus or minus 5 psi
Power limit cylinder (azimuth):	
Minimum	150 psi
Maximum	1,200 psi
Power limit cylinder (elevation):	
Minimum	350 psi
Maximum	1,200 psi
Relief valve	1,400 psi

System Capacity: motor with pump assembly and auxiliaries—2¾ gal.

Electrical System:

Induction motor:	
Operating speed	3,450 rpm
Power supply	115v ±10%, 60c, 3-phase
Output continuous	1 hp
Output, maximum intermittent overload	2.5 hp
Dither motor:	
Operating speed	1,725 rpm
Power supply	115v, 60c, 3-phase
Stroke motor:	
Operating speed, maximum	1,600 rpm
Fixed-field supply voltage	20v
Amplifier-controlled field voltage	20 v max

Electrical system—Continued

Stroke generator:	
Field	Permanent magnet
Output voltage, maximum	12.1v dc

PERFORMANCE

Operating limits:	
Azimuth	no limit (360° continuous)
Elevation	0 to +1422 mils (0 to +80 degrees)
Maximum operating rates:	
Traversing	355 mils (20 degrees) per sec
Elevating	213 Mils (12 degrees) per sec
Input power, maximum, continuous:	
Single-phase and three-phase	(approx) 115v, 60c, 1,100 watts, 9.6 amps
Single-phase	(approx) 115v, 60c, 160 watts, 2 amps

EQUIPMENT

Basic Issue Items: Sec ORD 7 SNL D–28.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length ____________

Width ____________

Height ____________

Volume ____________

Gross weight ____________

Ship tons ____________

Outside Continental United States

Length ____________

Width ____________

Height ____________

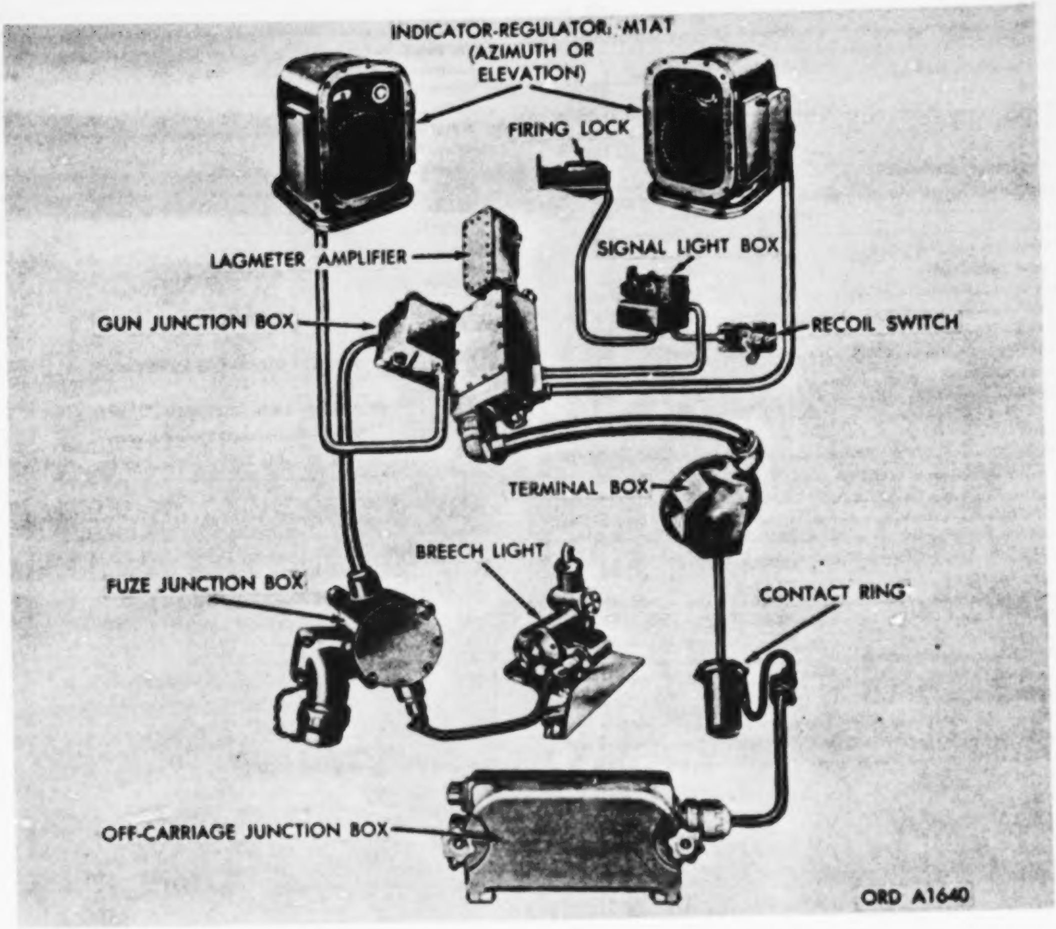
Volume ____________

Gross weight ____________

Ship tons ____________

References: SNL F–207, TM 9–6077.

INDICATOR SYSTEM: M4A1



Model	*Line item No.*	*Federal stock No.*
M4A1		

General

INDICATOR SYSTEM: M4A1 is a major component of the remote control system M2A1. This indicator system is considered the input network of the remote control system. The indicator system receives the data signals at the gun and converts these signals to equivalent electrical impulses for transmission to the power control system M4A1. The indicator system is composed of the following components.

Off-carriage junction box. Houses the amber "Ready" light, warning horn, slewing bell, and a telephone jack.

Contact ring. Provides continuous contact for incoming power and data circuits while permitting free rotation of the gun without twisting cables.

Terminal box. Provides a junction point for the lead wires from the spindle of the contact ring.

Gun junction box. Provides the main junction point, including the main power switch, for all electrical circuits of the remote control system (Part of the power control).

Indicator regular M1A1: Two electro-mechanical indicator regulators are used; one for elevation and one for azimuth. The indicator regulators indicate synchronism of the antiaircraft fire control system and the gun in azimuth and elevation.

Lagmeter amplifier. Receives the signal outputs of the indicator regulators and amplifies the signal for driving the lagmeter in the appropriate indicator regulator.

Signal-light box. Receives the signal "FIRE" light and the signal "CEASE FIRE" light.

Firing lock. The handle of the firing lock permits manual override of the lock in time of emergency

Recoil switch. The recoil switch is actuated when it is desired to trigger automatic radar tracking of a projectile to obtain average velocity data.

Fuze junction box. Houses terminal strips for wiring connections from the gun junction box to the breech light and the fuze setter.

Breech light. Provides light at the gun breech during night operations.

Differences among models

Data plate location

Classification: Standard B (OTCM 34045).

CHARACTERISTICS

Box, fuze junction, assy:	
Length	8 1/4 in.
Width	10 7/8 in.
Height	4 5/16 in.
Weight	17 lb
Box, gun junction, assy:	
Length	11 5/8 in.
Width	15 5/8 in.
Height	11 1/8 in.
Weight	125 lb.
Box, off-carriage junction:	
Length	26 in.
Width	9 1/2 in.
Height	10 1/8 in.
Weight	55 lb
Box, signal light, assy:	
Length	8 in.
Width	8 1/4 in.
Height	9 1/4 in.
Weight	16 1/4 lb
Box, terminal, assy:	
Length	10 1/4 in.
Width	
Height	4 in.
Weight	31 lb
Indicator-regulator, assy, M1A1 (2 units):	
Length	11 5/8 in.
Width	13 in.
Height	15 5/8 in.
Weight	88 lb
Light, breech assy:	
Length	6 1/2 in.
Width	9 1/2 in.
Height	9 1/2 in.
Weight	12 lb
Lock, firing, assy:	
Length	9 7/8 in.
Width	5 1/8 in.
Height	10 in.
Weight	20 5/8 lb
Ring, contact, assy:	
Length	10 7/8 in.
Width	
Height	14 3/4 in.
Weight	147 lb
Switch, recoil, assy:	
Length	5 1/4 in.
Width	3 5/16 in.
Height	2 1/2 in.
Weight	3 lb
Amplifier, lagmeter, assy:	
Length	18 5/8 in.
Width	9 3/4 in.
Height	7 1/2 in.
Weight	35 lb

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

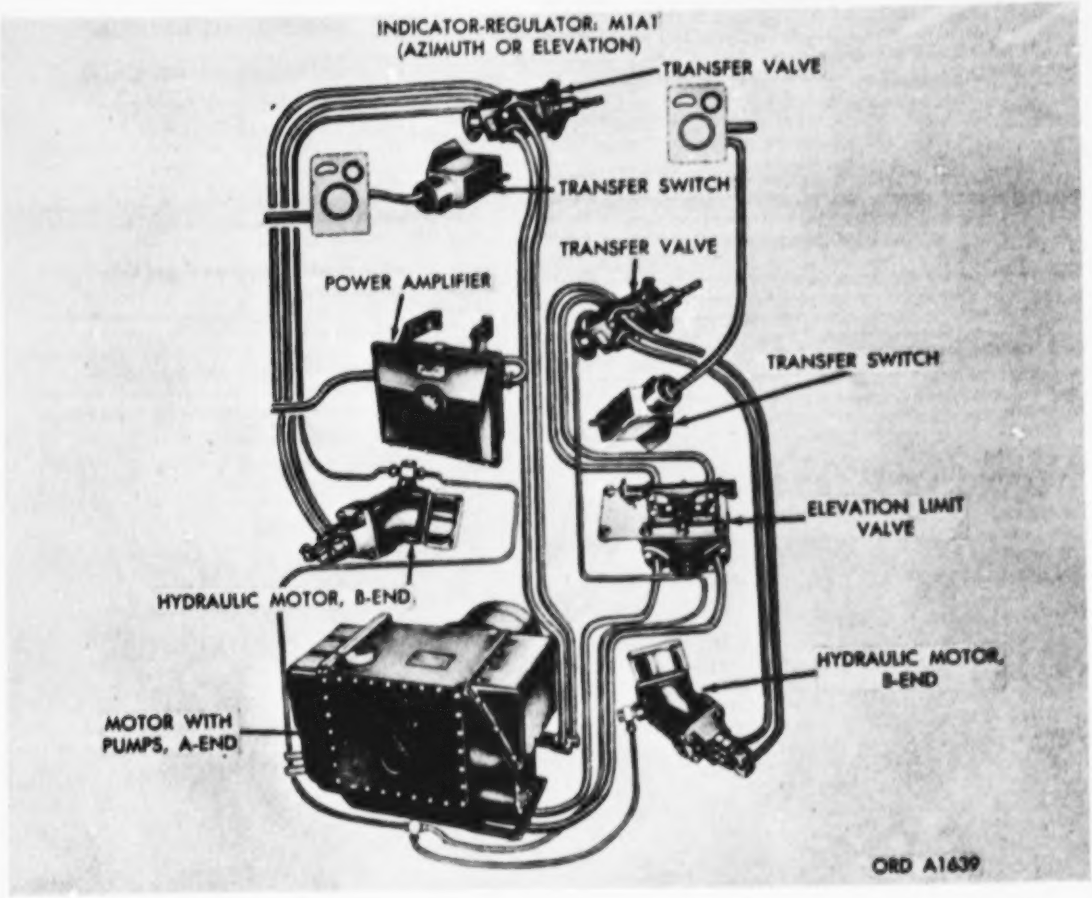
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: SNL F–207, TM 9–6077.

CONTROL, POWER: M4A1


INDICATOR-REGULATOR: M1A1
(AZIMUTH OR ELEVATION)
TRANSFER VALVE
TRANSFER SWITCH
TRANSFER VALVE
POWER AMPLIFIER
TRANSFER SWITCH
ELEVATION LIMIT VALVE
HYDRAULIC MOTOR, B-END
HYDRAULIC MOTOR, B-END
MOTOR WITH PUMPS, A-END
ORD A1639

Model	***Line item No.***	***Federal stock No.***
M4A1		

General

CONTROL, POWER: M4A1 is a major component of the remote control system M2A1. This power control system is considered as the output network of the remote control system. The power control receives the directional electrical signal from the indicator system M4A1, amplifies the signal, and converts the signal into a controlled mechanical and hydraulic movement. The controlled movement points the gun in elevation and azimuth in accordance with the data received from the antiaircraft fire control system, M33C, by the indicator system, M4A1, of the remote control system M2A1. The power control M4A1 is composed of the following components.

Power amplifier. Provides balanced electron tube amplification of the control signals.

Motor with pump assembly. Converts electrical data signals into hydraulic and mechanical movements. It contains mechanisms for pumping oil to the hydraulic drive motor in response to pilot movements.

Transfer valve assembly. One for azimuth and one for elevation are included in the hydraulic lines to enable manual or automatic operation of the system.

Transfer switch. Mounted and operates in conjunction with the transfer valves.

Hydraulic motor, B-end. One for azimuth and one for elevation receive oil under varying pressure from the motor with pump assembly, and converts the hydraulic power to mechanical power.

Elevation limit valve. Reduces the speed of the gun drive mechanism so that the upper and lower limits of the preset mechanical stops are approached more slowly.

Differences among models

Data plate location

Classification: Standard B (OTCM 34045).

CHARACTERISTICS

Amplifier, assy:	
Length	15 in.
Width	10 in.
Height	15⅝ in.
Weight	47 lb

CHARACTERISTICS—Continued

Motor, w/pumps, assy:	
Length	$19\frac{5}{8}$ in.
Width	$20\frac{1}{16}$ in.
Height	$14\frac{13}{16}$ in.
Weight	130 lb
Motor, hydraulic, assy (2 units):	
Length	$5\frac{1}{8}$ in.
Width	$2\frac{1}{8}$ in.
Height	$3\frac{29}{32}$ in.
Weight	8.5 lb
Switch, transfer (2 units):	
Length	$2\frac{7}{8}$ in.
Width	$1\frac{7}{8}$ in.
Height	$1\frac{27}{32}$ in.
Weight	1.5 lb
Valve, limit, assy:	
Length	$6\frac{5}{8}$ in.
Width	$5\frac{9}{16}$ in.
Height	$5\frac{9}{16}$ in.
Weight	3 lb
Valve, transfer, assy (2 units):	
Length	8 in.
Width	$2\frac{5}{8}$ in.
Height	$3\frac{15}{16}$ in.
Weight	12 lb

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

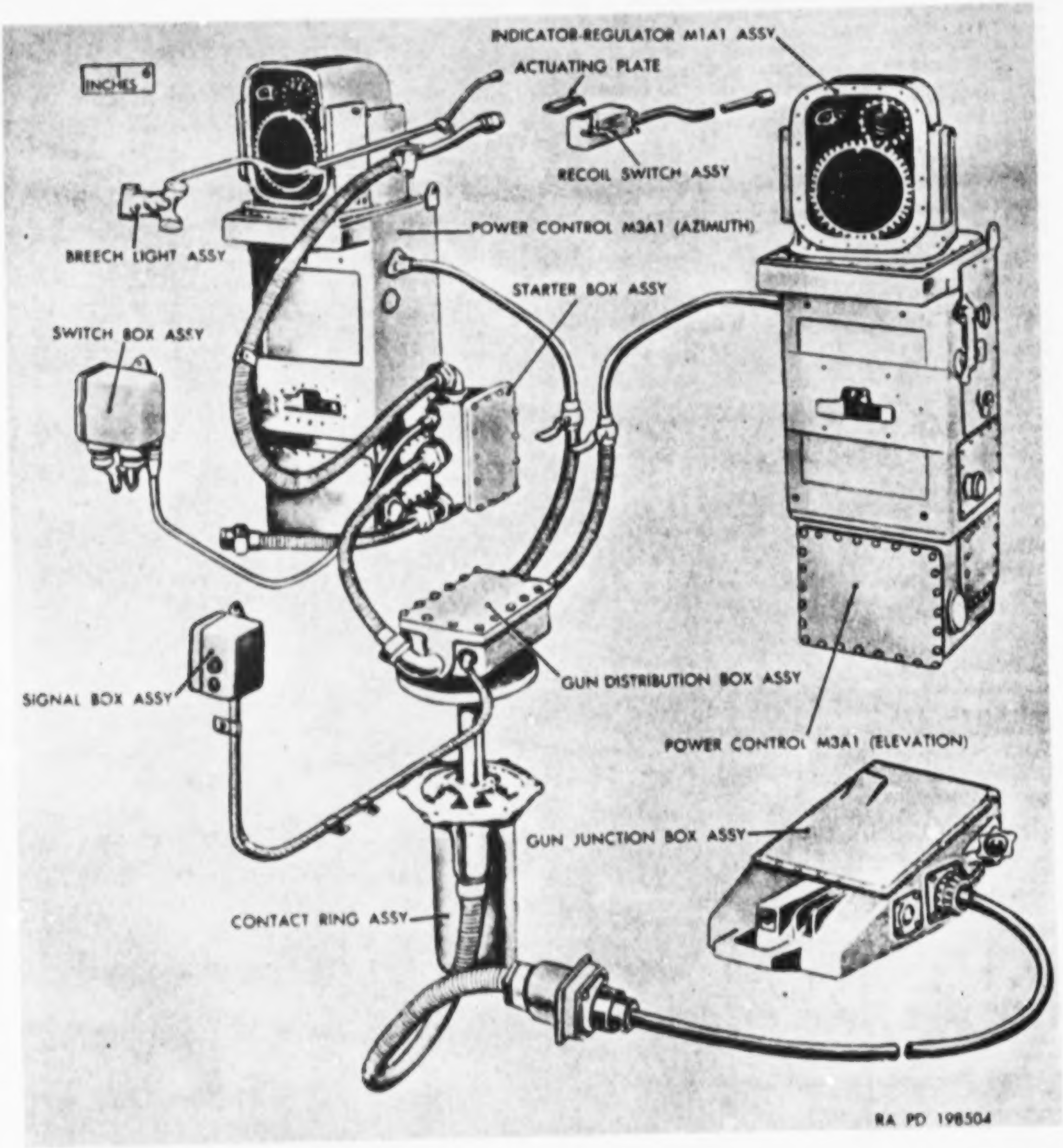
Shipped
Length ....
Width ....
Height ....
Volume (crated) ....
Gross weight (crated) ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-207, TM 9-6077.

REMOTE CONTROL SYSTEM: M12A1


INCHES
6
INDICATOR-REGULATOR M1A1 ASSY
ACTUATING PLATE
RECOIL SWITCH ASSY
BREECH LIGHT ASSY
POWER CONTROL M3A1 (AZIMUTH)
STARTER BOX ASSY
SWITCH BOX ASSY
SIGNAL BOX ASSY
GUN DISTRIBUTION BOX ASSY
POWER CONTROL M3A1 (ELEVATION)
GUN JUNCTION BOX ASSY
CONTACT RING ASSY

RA PD 198504

Model	*Line item No.*	*Federal stock No.*
M12A1		1290-335-5049

General

The REMOTE CONTROL SYSTEM: M12A1 is used on the 90-mm antiaircraft gun mount M2A1 for positioning the 90-mm antiaircraft gun M2A1 or M2A2 by means of electrical signals received from the fire control system M33C through the cable system M1A1. The positioning of the 90-mm gun M2A1 or M2A2 includes electrical, electronic, hydraulic, and mechanical action in the remote control system M12A1. The remote control system M12A1 consists of an INDICATOR SYSTEM M5A1 and a POWER CONTROL M3A1.

Components	**Page**
INDICATOR SYSTEM: M5A1	18-75
POWER CONTROL: M3A1	18-77

Differences among models

Data plate location

Classification: Standard A.

CHARACTERISTICS

Voltage	115 ± 5 percent
Cycles	60
Phase	3
Current	AC
Hydraulic system:	
Capacity (azimuth or elevation)	7 qt
Maximum hydraulic pressure	1,400 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

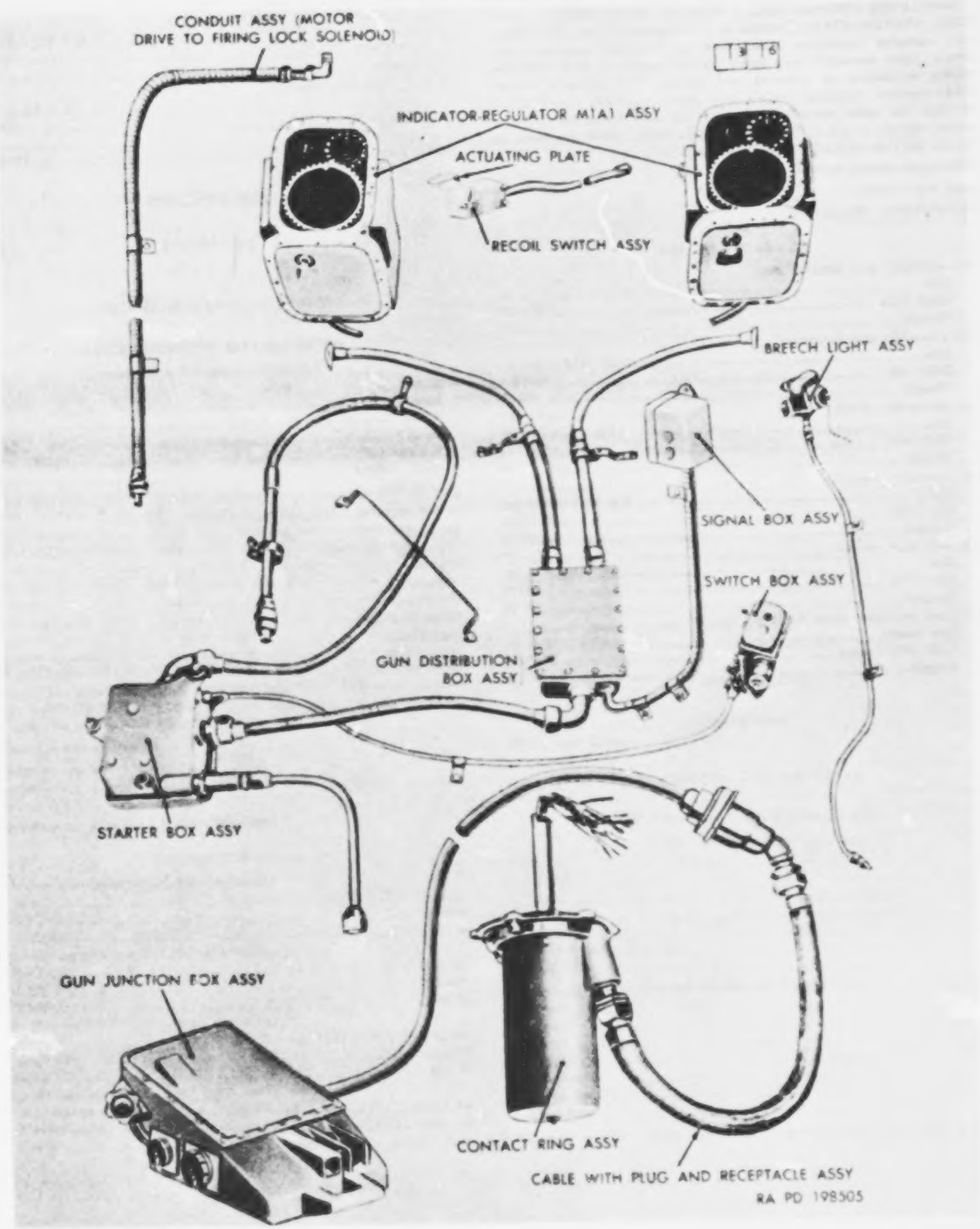
Outside Continental United States

Shipped per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-3028, TM 9-6083, TM 9-1290-221-35P, SNL F-207.

INDICATOR SYSTEM: M5A1


CONDUIT ASSY (MOTOR DRIVE TO FIRING LOCK SOLENOID)
1 9 6
INDICATOR-REGULATOR M1A1 ASSY
ACTUATING PLATE
RECOIL SWITCH ASSY
BREECH LIGHT ASSY
SIGNAL BOX ASSY
SWITCH BOX ASSY
GUN DISTRIBUTION BOX ASSY
STARTER BOX ASSY
GUN JUNCTION BOX ASSY
CONTACT RING ASSY
CABLE WITH PLUG AND RECEPTACLE ASSY

RA PD 198505

Model	*Secondary item Line item No.*	*Federal stock No.*
M5A1		1290–335–5048

General

INDICATOR SYSTEM M5A1, a component of the REMOTE CONTROL SYSTEM M12A1, consists of five (electrical) box assemblies, two indicator regulators M1A1, one contact ring assembly, one breech light assembly, one recoil switch assembly, and electrical wiring consisting of conduits and cables. The indicator system M5A1 receives electrical signals from the fire control system M33C through the cable system M1A1, converts and transmits the converted signals to the POWER CONTROL M3A1 which positions the 90-mm ANTIAIRCRAFT GUN M2A1 or M2A2.

Differences among models

Data plate location

Classification: Standard A.

CHARACTERISTICS

Box assembly, gun distribution:	
Size	11¾ x 7¼ x 4$\frac{9}{16}$ in.
ORD NO.	7652474
Weight	28 lb
Box assembly, gun junction:	
Size	22 x 16 x 7½ in.
ORD NO.	7652316
Weight	100 lb
Box assembly, signal:	
Size	6½ x 4 x 3$\frac{1}{16}$ in.
ORD NO.	7652300
Weight	5 lb
Box assembly, starter:	
Size	8½ x 10 x 4½ in.
ORD NO.	7652364
Weight	38 lb
Box assembly, switch:	
Size	4¾ x 8½ x 6 in.
ORD NO.	7676106
Weight	8 lb
Indicator-regulator assembly M1A1 (two):	
Size (each)	14¾ x 13½ x 13⅓ in.
ORD NO. (each)	7652308
Weight	75 lb
Light assembly, breech:	
Size	8½ x 4½ x 2½ in.
ORD NO.	6574505
Weight	4 lb
Ring assembly, contact (w/o cables):	
Size	14½ x 6¼ (dia) in.
ORD NO.	7694317
Weight	89 lb
Switch assembly, recoil:	
Size	4$\frac{5}{16}$ x 2$\frac{5}{16}$ x 2 in.
ORD NO.	7652352
Weight	3 lb
DWG NO.	F7652472

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

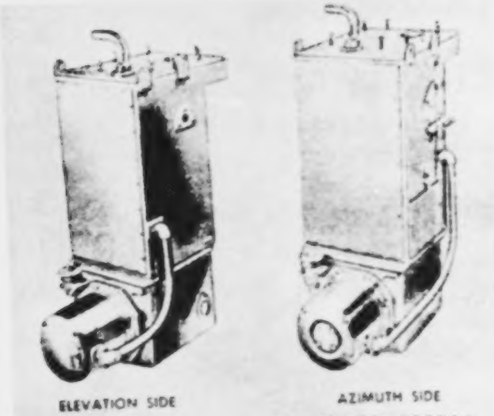
Outside Continental United States

Shipped per.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–3028, TM 9–6083, TM 9–1290–221–35P, SNL F–207, Sec. 1.

POWER CONTROL: M3A1 (M3E1)



ELEVATION SIDE AZIMUTH SIDE

RA PD 198506

Model	Secondary item Line item No.	Federal stock No.
M3A1 (M3E1)	-------------- --------------	1260-344-4620

General

POWER CONTROL: M3A1 (M3E1), a component of the REMOTE CONTROL SYSTEM M12A1, consists of an azimuth power control assembly M3A1 (ORD NO. 7652412) and an elevation power control assemby M3A1 (ORD NO. 7652418). The azimuth power control assembly consists of an azimuth drive controller assembly M7A1 and a hydraulic drive assembly M1. The elevation power control assembly consists of an elevation drive controller assembly M8A1 and a hydraulic drive assembly M1. A drive controller assembly (M7A1 or M8A1) receives directional signals from an indicator-regulator assembly M1A1 (elevation or azimuth) which is amplified and modified to provide initial mechanical motion of low power to control the applicable (elevation or azimuth) hydraulic control pump, hydraulic motor, hydraulic fluid, and gears for the positioning of the 90-mm GUN M2A1 or M2A2.

Differences among models

Data plate location

Immediately above transfer lever of drive controller assembly M7A1 or M8A1.

Classification: Standard B (OTCM 33593).

CHARACTERISTICS

Controller assembly M7A1, drive azimuth:	
Size	21⅛ x 13 x 16⅜ in.
ORD NO.	7652413
Weight	140 lb
Controller assembly M8A1, drive, elevation:	
Size	21⅛ x 13 x 16⅜ in.
ORD NO.	7652419
Weight	154 lb
Drive assembly M1 (azimuth or elevation):	
Size	12⅝ x 10 1/16 x 11⅛ in.
ORD NO.	6582691
Weight	215 lb
Induction motor:	
Continuous output	1 hp
Maximum overload	2½ hp
Speed	3,450 rpm
Induction motor—Continued	
Phase	3
Cycles	60
Voltage	115 ± 5 percent
Current	AC
Hydraulic pump speed	3,450 rpm
Replenisher pump speed	2,588 rpm
Dither eccentric shaft speed	2,588 rpm
Hydraulic system capacity (elevation or azimuth)	7 qt
Hydraulic operating pressures:	
Back pressure on high pressure tubes	85 psi
Servo cylinder	85 psi
Power limit cylinder (operated at)	710 psi
Maximum high pressure (tubes to hydraulic motor)	1400 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

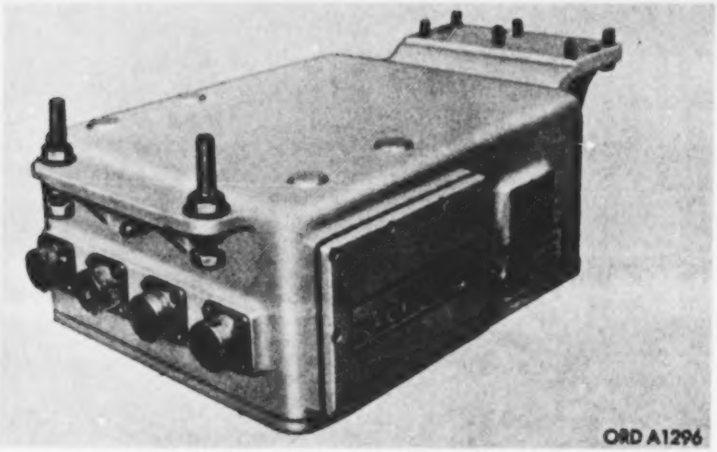
Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-3028, TM 9-6083, TM 9-1290-221-35P, SNL F-207

SERVOMECHANISM, ELEVATION, M1 (T1)



Model	*Secondary item Line item No.*	*Federal stock No.*
M1		1290–622–4933

General

SERVOMECHANISM, ELEVATION, M1 (T1), is a component of the direct primary fire-control system of TANK, COMBAT, FULL-TRACKED: 120-mm gun, M103A1. The servomechanism is a positive-type, two-speed position servo that is connected directly to RANGE FINDER, FIRE CONTROL: M15 (T52) by means of the coupling clamp on the output to elevate and/or depress the range finder in response to an electrical signal received from TRANSMITTER, SUPERELEVATION: M23 (T14). The range finder is linked to the 120-mm gun cannon by the servo system, and movement of the cannon to place the line of sight of PERISCOPE: M29 (T50E1) on target automatically places the range finder's line of sight on target also. The servomechanism provides a degree of accuracy not practically obtainable by means of a mechanical linkage and gear drives. The two-speed designation is derived from the use of coarse-geared and fine-geared synchros. The fine synchro increases the amount of voltage available when the system is near zero position, thus increasing the sensitivity of the system.

Differences among models

Data plate location

Classification: Standard A (OTCM 36540).

CHARACTERISTICS

Length	1 ft, 9 in.
Width	12 in.
Height	6 in.
Weight	54 lb
Power	115 v, 400 c, ac; 24 v, dc

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped servomechanisms per

Length --

Width --

Height --

Volume --

Gross weight ----------------------------------

Ship tons ------------------------------------

Outside Continental United States

Shipped servomechanisms per

Length --

Width --

Height --

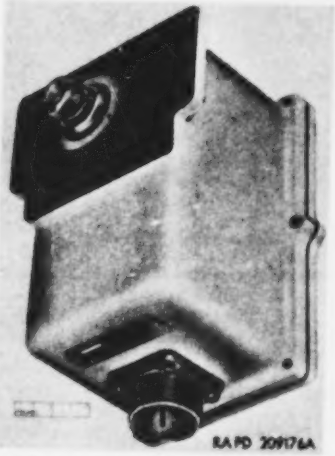
Volume --

Gross weight ----------------------------------

Ship tons ------------------------------------

References: TM 9–1290–323–35, TM 9–1290–323–35P.

TRANSMITTER, SUPERELEVATION: M22 (T13)



Model	*Secondary item Line item No.*	*Federal stock No.*
M22 (T13)		1290–763–3152

General

TRANSMITTER, SUPERELEVATION: M22 (T13) automatically elevates or depresses the gun as the gunner moves the range knob of the range finder. It consists of a synchro-torque receiver, a multiple-contact switch, a servo motor, and a geared coupling drive. The synchro-torque receiver is electrically synchronized with the synchro-torque transmitter in the range finder, any movement of the rotor of the transmitter resulting in like movement in the receiver. A six-pole receptacle assembly is used to connect the superelevation transmitter M22 (T13) by a cable to a receptacle at the rear of the range finder. An arm assembly connected to the power source is attached directly to the rotor of the synchro receiver, so the movement of the rotor will swing the arm assembly points into contact with the points of the switch. The switch applies voltage to the servo motor which, through gearing, drives the coupling which is linked to the hydraulic system for positioning the gun to the required superelevation. The unit is mounted on the oil gear power unit and is used in conjunction with the range finder to set superelevation on the gun.

The superelevation transmitter M22 (T13) serves as a component of the fire control system of the TANK, COMBAT, FULL TRACKED: 90-mm gun, M47 in conjunction with FINDER, RANGE: M12 (T41E3), and as a member of the fire control system of the TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 (T43E1) in conjunction with FINDER, RANGE: M14 (T42E1).

Differences among models

Data plate location

The identification plate is located on the housing.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Operation:

Voltage	115-volt
Frequency	400 cycle ac
Length	8⅝ in.
Width	5 in.
Height	4⅞ in.
Weight	6.9 lb

PERFORMANCE

EQUIPMENT

Associated: *

FINDER, RANGE: M12 (T41E3)
FINDER, RANGE: M14 (T42E1)

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped superelevation transmitters per box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped superelevation transmitters per box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-365, TM 9–6078.

* For characteristics and data, see item in section 14.

PLOTTING SET, SOUND RANGING: M53

(Illustration and data to be added at a later date)

Model	*Line item No.*	*Federal stock No.*
M53	4-80365-10	....

General

PLOTTING SET, SOUND RANGING: M53 (formerly PLOTTING KIT, SOUND RANGING: T48) is used to enable accurate determination of the location of artillery weapons. It is composed of a PLOTTING BOARD, FLASH RANGING, FIRE CONTROL: M18,* WIND CORRECTOR, SOUND RANGING, M1A1,* with various NOMOGRAPHS, TEMPLATES, PROTRACTORS, and other components.

Differences among models

Data plate location

Classification: Standard A (OTCM 37753).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

* For characteristics and data, see items in section 12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per

Length ....

Width ....

Height ....

Volume ....

Gross weight ....

Ship tons ....

Outside Continental United States

Shipped per

Length ....

Width ....

Height ....

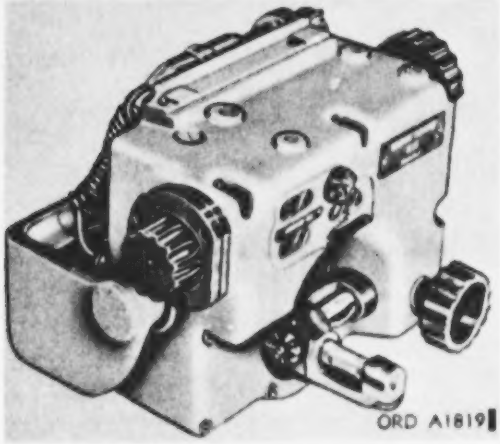
Volume ....

Gross weight ....

Ship tons ....

References:

QUADRANT, FIRE CONTROL: ELEVATION, M15 (T23E2)



ORD A1819

Secondary item

Model	*Line item No.*	*Federal stock No.*
M15		1290-896-2236

General

QUADRANT, FIRE CONTROL: elevation, M15 (T23E2), is used with HOWITZER, LIGHT, SELF-PROPELLED: full-tracked, 105-mm, T195E1,* HOWITZER, MEDIUM, SELF-PROPELLED: full-tracked, 155-mm, T196E1,* GUN, FIELD ARTILLERY, SELF-PROPELLED: full-tracked, 175-mm, M107 (T235E1) and HOWITZER, HEAVY, SELF-PROPELLED: full-tracked: 8-inch, M110 (T236E1).*

The quadrant incorporates the mechanisms and controls necessary for instrument elevation and cant (cross-level) movement. A mechanical counter is used in registering elevation. A correction counter assembly is used for incorporating relatively constant elevation corrections so that the elevation counter registers actual firing table elevation readings. The quadrant contains a built-in instrument lighting system with an integral power supply. The quadrant is the measuring device for laying the weapon in elevation for indirect firing.

Differences among models

Data plate location

The identification plate is located on the front of the housing.

Classification

CHARACTERISTICS

Length (less attaching volts)	1 ft
Width	9 in.
Height	9 in.
Weight	23⅛ lb

PERFORMANCE

Elevation	−228 to ±1,333 mils
Correction (elevation)	±55 mils
Cross level	34 deg
Incremental reading (counters)	1 mil

EQUIPMENT

Basic Issue Items: See TM 9-2300-216-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 quadrant per shipping container

Length	1 ft, 2⅛ in.
Width	11 in.
Height	11⅛ in.
Volume	0.98 cu ft
Gross weight	29.75 lb
Ship tons	0.02

Outside Continental United States

Shipped per

Length	1 ft, 2⅛ in.
Width	11 in.
Height	11⅛ in.
Volume	0.98 cu ft
Gross weight	29.75 lb
Ship tons	0.02

References: TM 9-1290-322-35P, TM 9-2300-216-10,
TM 9-2350-217-10, TM 9-1290-322-35.

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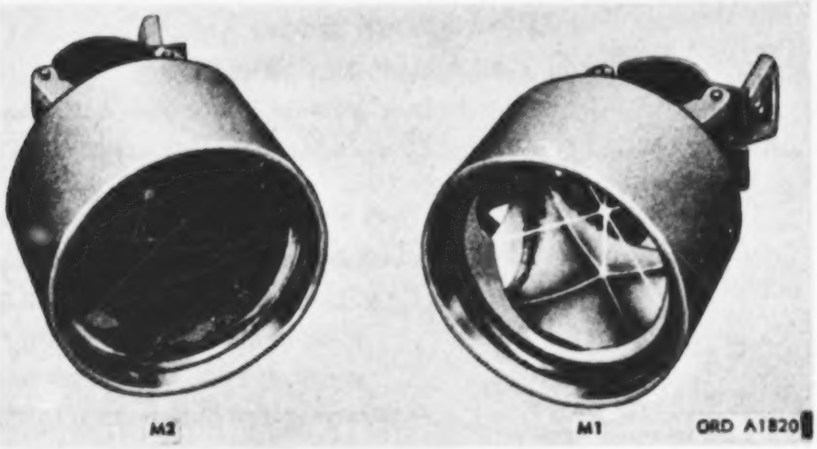
* For characteristics and data, see items in section 23.

REFLECTOR, AIMING POST: M1 (CLEAR) AND M2 (RED)



ORD A1820

Secondary item

Model	*Line item No.*	*Federal stock No.*
M1		1290-722-3858
M2		1290-722-3862

General

REFLECTOR, AIMING POST: M1 (clear) and M2 (red) are retrodirective reflecting devices that are attached to standard aiming posts. The reflectors are a means of identifying and distinguishing the near and far posts in darkness.

The aiming post reflector is a tetrahedral prism mounted in a conforming aluminum housing. A clamp at the rear of the housing secures the reflector to the aiming post.

In operation, the reflector M2 (reflecting red light) is attached to the near aiming post.

The reflectors are used with GUN, FIELD ARTILLERY, SELF-PROPELLED: 175-mm, M107 (T235E1),* HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 (T236E1),* HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, T195E1,* and HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, T196E1.*

Differences among models

Aiming post reflector M2 is identical to the M1 except that a red optical glass filter is cemented to the outside surface of the tetrahedral prism.

Data plate location

The identification decal is located on the side of the housing.

Classification: Standard A (OTCM 37349).

CHARACTERISTICS

Diameter	3⅛ in.
Height	3¹⁵⁄₁₆ in.
Weight	1.18 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2300-216-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per shipping container.

Length	4⅝ in.
Width	3⅝ in.
Height	3⅝ in.
Gross weight	1.38 lb
Volume	0.04 cu ft
Ship tons	0.001

Outside Continental United States

Shipped 1 per shipping container.

Length	4⅝ in.
Width	3⅝ in.
Height	3⅝ in.
Gross weight	1.38 lb
Volume	0.04 cu ft
Ship tons	0.001

References: TM 9-1290-324-35P.

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* For characteristics and data, see items in section 18.

SECTION 19

GUIDED MISSILE SYSTEMS

(CLASSES 1410 through 1450, and 4935)

(Includes missiles and rockets incorporating mechanisms capable of altering normal flight paths)

	Page
AIR DEFENSE GUIDED MISSILE SYSTEM—HAWK	19-2
AIR DEFENSE GUIDED MISSILE SYSTEM—NIKE-AJAX	19-20
AIR DEFENSE GUIDED MISSILE SYSTEM—NIKE-HERCULES	19-76
ANTITANK GUIDED MISSILE SYSTEM—SS-10	19-123
ANTITANK GUIDED MISSILE SYSTEM—SS-11	19-134
ARTILLERY GUIDED MISSILE SYSTEM—CORPORAL	19-146
ARTILLERY GUIDED MISSILE SYSTEM—LACROSSE	19-183
ARTILLERY GUIDED MISSILE SYSTEM—REDSTONE	19-192
HONEST JOHN ROCKET SYSTEM	19-221
LITTLE JOHN ROCKET SYSTEM	19-230

AIR DEFENSE GUIDED MISSILE SYSTEM—HAWK

(Includes missile, ground guidance, control, handling, and servicing equipment)

Page

AIR DEFENSE GUIDED MISSILE: M3 (XM3E1), XM3, and exercise 19-3

CONSOLE, ASSAULT FIRE COMMAND: w/e 19-4

GUIDED MISSILE BATTERY CONTROL CENTRAL: AN/TSW-2, AN/TSW-XO-2, AN/TSW-2-XO-3, w/e 19-5

INTERCONNECTING GROUP: OA-2511(XO-1)G, w/e 19-6

LAUNCHER, ZERO LENGTH, GUIDED MISSILE: XM78, XM78E2, and XM78E3, w/e 19-7

LOADER-TRANSPORTER, GUIDED MISSILE: XM501, XM501E1, and XM501E2, w/e 19-8

RADAR SET, CW, ACQUISITION, TRAILER MOUNTED: AN/MPQ-34(XO-1), AN/MPQ-34(XO-3), and AN/MPQ-34(XO-4), w/e 19-9

RADAR SET, CW, ILLUMINATOR, TRAILER MOUNTED: AN/MPQ-33(XO-1), AN/MPQ-33(XO-2), and AN/MPQ-33(XO), w/e 19-10

RADAR SET, PULSE ACQUISITION, TRAILER MOUNTED: AN/MPQ-35, AN/MPQ-35(XO-3), and AN/MPQ-35(XO-4), w/e 19-11

SHOP EQUIPMENT, GUIDED MISSILE REMOTE CONTROL SYSTEM, ORGANIZATIONAL MAINTENANCE: w/e 19-15

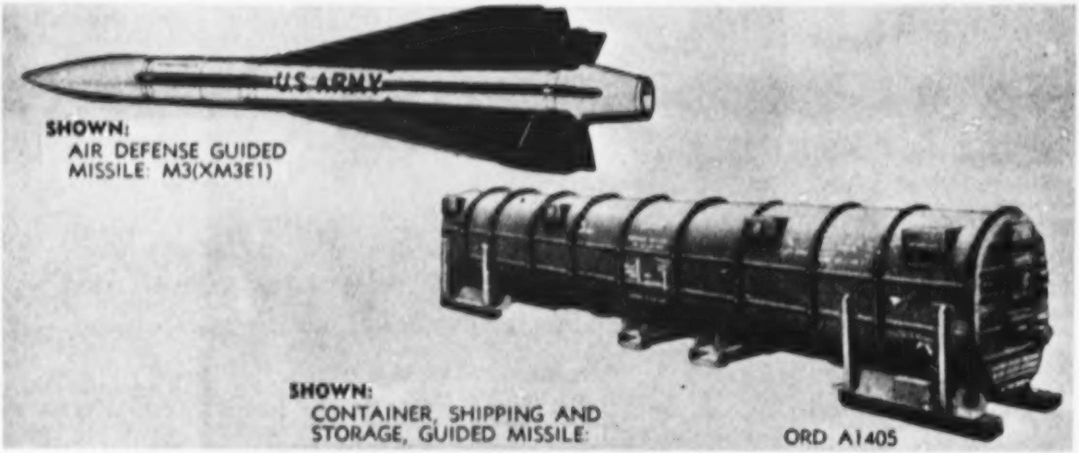
SHOP EQUIPMENT, GUIDED MISSILE, ORGANIZATIONAL MAINTENANCE (MISSILE TEST SHOP: AN/MSM-43(XO), TRAILER MOUNTED, w/e 19-16

The equipment listed below is required to complete the system in the maintenance of the above missile and associated ground handling, servicing, and firing equipment.

PALLET, LOADING AND STORAGE, GUIDED MISSILE: XM1 19-18

GENERATOR SET: HF45D 19-19

AIR DEFENSE GUIDED MISSILE: M3 (XM3E1), XM3, AND EXERCISE


U.S. ARMY
SHOWN:
AIR DEFENSE GUIDED MISSILE: M3(XM3E1)
SHOWN:
CONTAINER, SHIPPING AND STORAGE, GUIDED MISSILE
ORD A1405

Model	*Line item No.*	*Federal stock No.*
M3 (XM3E1)		1410–709–9649
Exercise		1410–690–5163
XM3		1410–691–4453

General

AIR DEFENSE GUIDED MISSILE: M3 (XM3E1) is a surface-to-air missile whose purpose is to destroy aircraft identified and designated as targets. The missile XM3E1 makes use of a semiactive-homing guidance system, an automatic detonation system, and a solid fuel propulsion system. The missile body consists of the front-body section (guidance section, access cover band, and radome) and rear-body section (warhead, rocket motor, elevon actuator sections, and tailcone). The missile containers are transported by a 2½-ton truck M36.

Differences among models

Data plate location

Classification: Limited Production (OTCM 37034).

CHARACTERISTICS

Missile:	
Complete round as fired:	
Weight	1,295 lb
Length	16 ft, 6 in.
Diameter	1 ft, 2 in.
Front body section:	
Weight	175 lb
Length	6 ft, 4 in.
Rear body section:	
Weight	1,009.4 lb
Length	10 ft, 2 in.
Wing assemblies (4):	
Weight	93 lb
Length	7 ft, 11 in.
Width	1 ft, 4⅝ in.
Missile—Continued	
Warhead:	
Weight	110 lb
Diameter	1 ft, 3⅝ in.
Height	1 ft, 1 in.

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: TM 9–1410–500–12

INSTRUCTIONAL MATERIAL

GUIDED MISSILE, AIR DEFENSE: M16
GUIDED MISSILE TRAINING: dummy

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 missile per metal container

Length	18 ft
Width	3 ft, 5½ in.
Height	2 ft, 4⅝ in.
Volume	
Gross weight	3,100 lb
Ship tons	

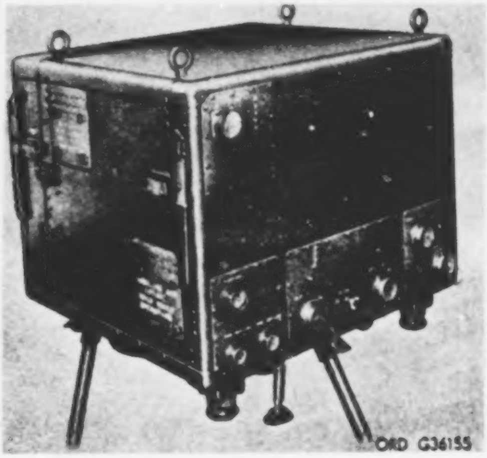
Outside Continental United States

Shipped 1 missile per metal container

Length	18 ft.
Width	3 ft, 5½ in.
Height	2 ft, 4⅝ in.
Volume	
Gross weight	3,100 lb
Ship tons	

Reference: TM 9–1410–500–12.

CONSOLE, ASSAULT FIRE COMMAND: W/E



Model	*Major item Line item No.*	*Federal stock No.*
W/E	4-10460-01	1430-624-4588

General

CONSOLE, ASSAULT FIRE COMMAND: w/e, is a rectangular, insulated cabinet which is divided into six compartments and six panels. The compartments house the various chassis which are used to operate the assault firing unit. During normal operation, the assault firing unit rests on three folding legs and the open cover compartment supports the shelter. Accessory equipment includes the shelter, folding stool, viewing hood, headset, and two telephone sets.

Differences among models

Data plate location

Classification: Limited Production (OTCM 37240).

CHARACTERISTICS

Classified.

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: TM 9-1430-505-12/1

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 console per crate.

Length	3 ft, 8 in.
Width	3 ft, 4⅝ in.
Height	3 ft, 4⅞ in.
Volume	42 cu ft
Gross weight	490 lb
Ship tons	1.05

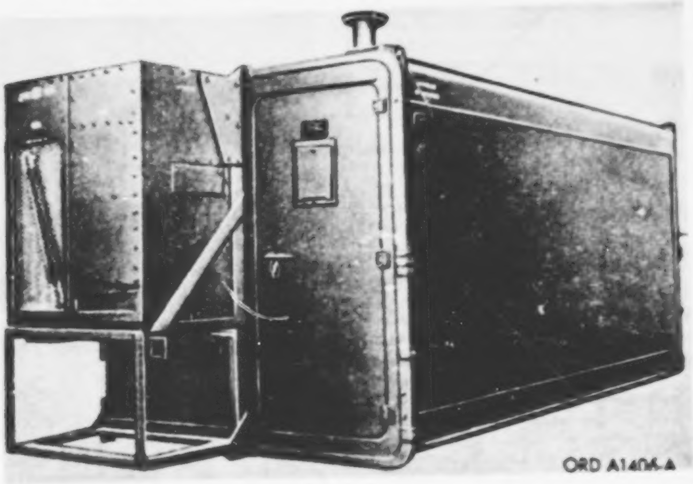
Outside Continental United States

Shipped

Length	3 ft, 8 in.
Width	3 ft, 4⅝ in.
Height	3 ft, 4⅞ in.
Volume	42 cu ft
Gross weight	490 lb
Ship tons	1.05

References: TM 9-1430-505-12/1, TM 9-1430-505-35.

GUIDED MISSILE BATTERY CONTROL CENTRAL: AN/TSW–2, AN/TSW–XO–2, AN/TSW–2–XO–3, W/E


ORD A1406-A

Major item

Model	*Line item No.*	*Federal stock No.*
AN/TSW-2	4-16560-01	1430-624-4582
AN/TSW-2-XO-2	4-16560-02	1430-708-2896
AN/TSW-2-XO-3	4-16560-03	1430-714-3316

General

GUIDED MISSILE BATTERY CONTROL CENTRAL: AN/TSW-2, AN/TSW-2-XO-2, and AN/TSW-2-XO-3 displays and provides control of information from the pulse acquisition radar (PAR), cw acquisition radar, cw illuminators, launchers, and missiles. It also provides the means for evaluating target data, transferring it to the selected illuminator, determining missile status, and firing missiles. The battery control central (BCC) is transported by TRUCK, CARGO: 2½-ton, 6 x 6, M36,* or transported by helicopter or cargo plane.

Differences among models

Data plate location

The identification plate is located on the entrance door.

Classification: Limited Production (OTCM 37240).

CHARACTERISTICS

Weight	5,200 lb
Height	6 ft, 8 in.
Width	6 ft, 10 in.
Depth	15 ft, 8 in.

EQUIPMENT

Basic Issue Items: TM 9–1430–501–12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1430–714–3316

Within Continental United States

Shipped	
Length	15 ft, 8 in.
Width	6 ft, 11 in.
Height	6 ft, 9 in.
Volume	731 cu ft
Gross weight	5,450 lb
Ship tons	18.2

Outside Continental United States

Shipped	
Length	16 ft, 11⅝ in.
Width	7 ft, 8 in.
Height	8 ft, 6 in.
Volume	1155.6 cu ft
Gross weight	7,810 lb
Ship tons	28.8

FSN 1430–624–4582

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1430–708–2896

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–1430–501–12, TM 9–1430–501–35.

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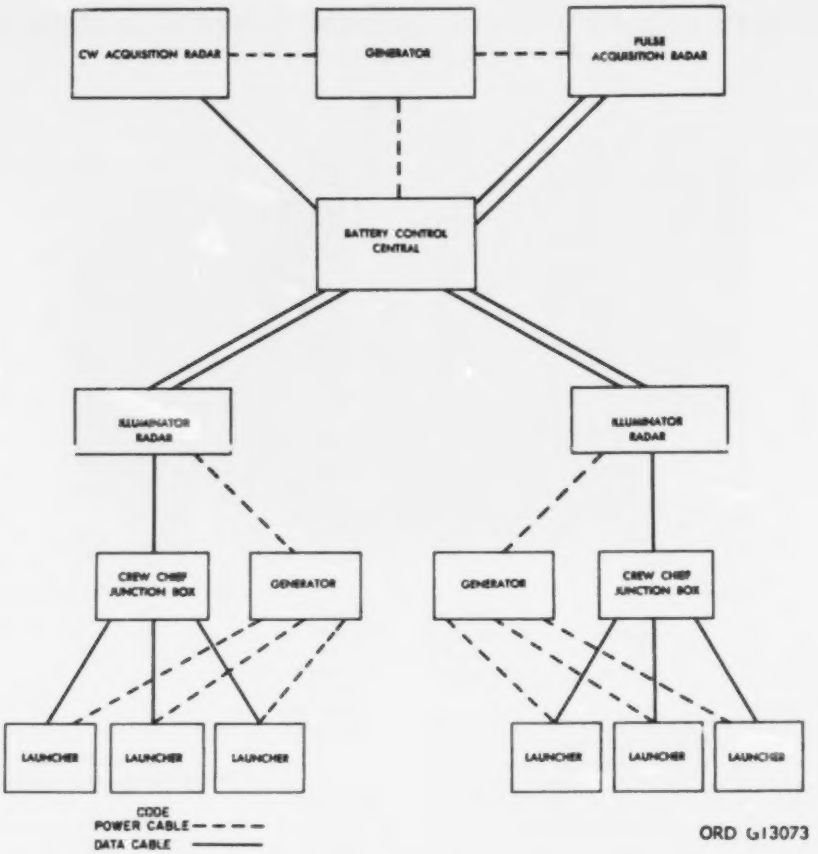
* For characteristics and data, see item in section 21.

INTERCONNECTING GROUP: OA-2511(XO-1)/G, W/E


CW ACQUISITION RADAR
GENERATOR
PULSE ACQUISITION RADAR
BATTERY CONTROL CENTRAL
ILLUMINATOR RADAR
ILLUMINATOR RADAR
CREW CHIEF JUNCTION BOX
GENERATOR
GENERATOR
CREW CHIEF JUNCTION BOX
LAUNCHER
LAUNCHER
LAUNCHER
LAUNCHER
LAUNCHER
LAUNCHER
CODE
POWER CABLE – – – –
DATA CABLE ———

ORD G13073

Model	Major item	Line item No.	Federal stock No.
OA-2511(XO-1)/G	---------	--------------	1430-708-8106

General

INTERCONNECTING GROUP: OA-2511(XO-1)/G, w/e, consisting of an electrical cable assembly set and two interconnecting boxes (crew chief junction boxes), provides conductor paths for the HAWK mobile battery and the means of electronically connecting from one to three launchers to one cw illuminator. The power cables (12 ea) are connected from the generators to the launchers, radars, and the battery control central (one cable is a spare). The data cables (15 ea) connect the radars, battery control central, crew chief junction boxes, and launchers. Both types of cables are placed on cable reels for truck and air transportation. The crew chief junction box receives command signals from the battery control central and the illuminator, and distributes these signals to three launchers. During launcher maintenance, or missile loading conditions, the crew chief junction box may be used to interrupt control of the launcher by the battery control central.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Power cables:	
Weight	175 lb
Weight (with cable reel)	225 lb
Conductors	4 No. 8 AWG
Length	875 ft
Data cables:	
Weight	190 lb
Weight (with cable reel)	
Conductors	40 No. 20 AWG and 2 73-ohm coaxial
Length	375 ft
Interconnecting box (crew chief junction box):	
Weight	50 lb
Length	1 ft, 8$\frac{1}{16}$ in.
Width	1 ft, 1$\frac{5}{8}$ in.
Height	1 ft, 3$\frac{1}{16}$ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

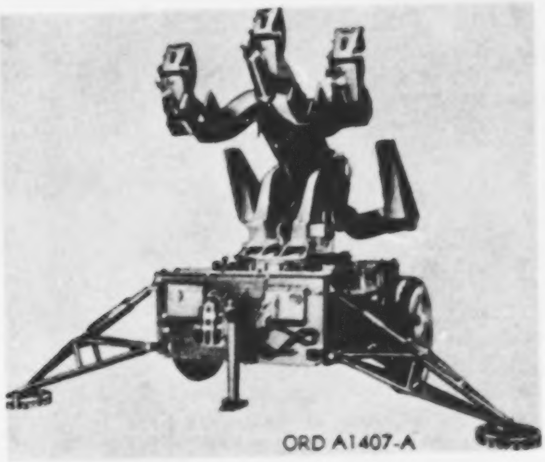
Shipped
Length ------------------------------------
Width ------------------------------------
Height ------------------------------------
Volume ------------------------------------
Gross weight ------------------------------------
Ship tons ------------------------------------

Outside Continental United States

Shipped
Length ------------------------------------
Width ------------------------------------
Height ------------------------------------
Volume ------------------------------------
Gross weight ------------------------------------
Ship tons ------------------------------------

TM 9-1400-500-10, TM 9-1440-500-12/1.

LAUNCHER, ZERO LENGTH, GUIDED MISSILE: XM78, XM78E2, AND XM78E3, W/E



Model	*Major item Line item No.*	*Federal stock No.*
XM78	4-21884-01	1440-624-4585
XM78E2	4-21884-02	1440-708-2898
XM78E3	4-21884-03	1440-714-3317

General

LAUNCHER, ZERO LENGTH, GUIDED MISSILE: XM78, XM78E2, AND XM78E3, w/e, positions from one to three missiles in a ready-to-fire attitude. The launcher points the missile in the proper firing direction and provides the physical support from which the missiles are fired. The launcher consists of the base assembly, boom support assembly, and missile boom.

Differences among models

Data plate location

Classification: Limited Production (OTCM 37240).

CHARACTERISTICS

XM78E3:	
Weight:	
Less missiles	4,326 lb
With missiles	6,228 lb
Length overall (less missiles):	
March order	14 ft, 4 in.
Emplaced	12 ft, 8 in.
Width overall (less missiles):	
March order	8 ft
Emplaced	15 ft, 4 in.
Height (less missiles):	
March order	7 ft, 8 in.
Full elevation	12 ft
Height (with missiles)	9 ft, 8 in.
Height (full elevation, with missiles)	19 ft, 5 in.
Elevation limits	72 ± 10 to + 1240 ± 10 mils
Azimuth travel	6,400 mils continuous
Fording depth (max)	2 ft, 6 in.
Tires:	
Size	900 x 20
Pressure:	
Highway	40 psi
Rough terrain	25 psi
Base hydraulic system:	
Reservoir	1.62 gal.
Pressure	hand operation
External power requirements	13.5 kva, 416 vac, 400 cps, 3 phase
Main hydraulic system reservoir	2.30 gal.

PERFORMANCE

Operating slope	10 deg.
Main hydraulic system:	
Operating pressure	2,500 psi minimum
Accumulator pressure	1,550 psi ± 50 psi
Towing speed:	
Highway	50 mph
Rough terrain	25 mph

EQUIPMENT

Basic Issue Items: TM 9-1440-500-12/1

INSTRUCTIONAL MATERIAL

PRIMER MOVER

TRUCK CARGO: 2½-ton, 6 x 6, M35 *

STORAGE AND SHIPMENT DATA

FSN 1440-624-4585

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1440-708-2898

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1440-714-3317

Within Continental United States

Shipped	
Length	14 ft, 7 in.
Width	8 ft
Height	7 ft, 8 in.
Volume	900 cu ft
Gross weight	4,380 lb
Ship tons	22.50

Outside Continental United States

Shipped	
Length	14 ft, 7 in.
Width	8 ft
Height	7 ft, 8 in.
Volume	900 cu ft
Gross weight	4,380 lb
Ship tons	22.50

Reference: TM 9-1440-500-12/1

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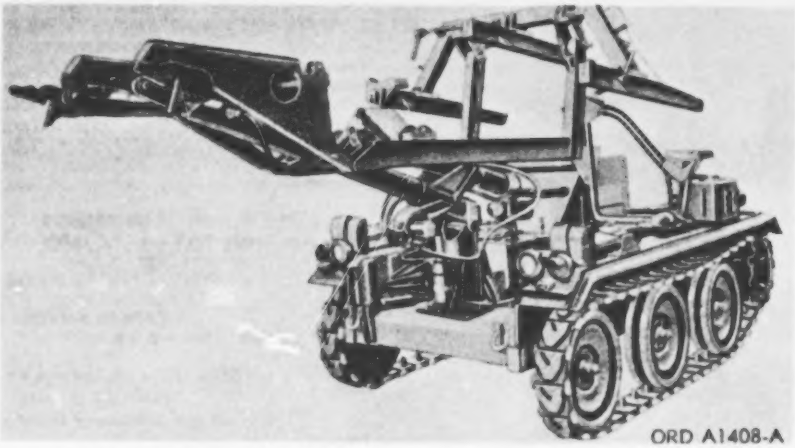
* For characteristics and data, see item in section 21.

LOADER-TRANSPORTER, GUIDED MISSILE: XM501, XM501E1, AND XM501E2, W/E


ORD A1408-A

Model	*Major item* *Line item No.*	*Federal stock No.*
XM501	4–22180–01	1450–479–5656
XM501E1	4–22180–02	1450–665–3180
XM501E2	4–22180–03	1450–768–7046

General

LOADER-TRANSPORTER, GUIDED MISSILE: XM501, XM501E1, AND XM501E2, w/e, is used for tactical and extended-nose missile handling in and around the battery area. The loader is a full-tracked, self-propelled vehicle capable of speeds up to 10 mph. The loader consists of two major assemblies, the carrier and the superstructure. The carrier is the mounting base for the power plant, transfer box, drive shafts, controlled differential, tracks, final drive, fuel system, hydraulic system, operator's compartment, and superstructure. The superstructure is composed of the azimuth system, elevation system, and yoke assembly. The loader can be adapted for crane operation by rotating the entire superstructure 3,200 mils and installing a boom, cable, and sheaves. The loader-transporter is transported by a truck cargo: 2½-ton, 6 x 6, M36.*

Differences among models

Data plate location

The loader identification plate is located on the right front fender.

Classification: Limited Production (OTCM 37240).

CHARACTERISTICS

Weight:	
Empty	4,500 lb
Missiles (3) aboard	8,500 lb
Length:	
Transport position	16 ft, 2 in.
Superstructure operating arc:	
Maximum	11 ft, 8 in.
Minimum	9 ft, 5 in.
Azimuth arc (from center), right or left	15 deg (267 mils)
Roll arc (from horizontal), right or left	15 deg (267 mils)
Elevation arc (max)	40 deg (711.1 mils)
Turning radius	20 ft
Fording depth	1 ft, 8 in.
Capacity:	
Hydraulic system	10 U.S. gal.
Hydraulic reservoir	6 U.S. gal.
Extension arc:	
First phase	86 deg (1528.8 mils)
Second phase	50 deg (888.8 mils)

PERFORMANCE

Speed (maximum when loaded with three missiles)	10 mph
Operating slope (for missile transfer operation)	10 deg

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

* For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA

FSN 1450–479–5656

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1450–665–3180

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1450–768–7046

Within Continental United States

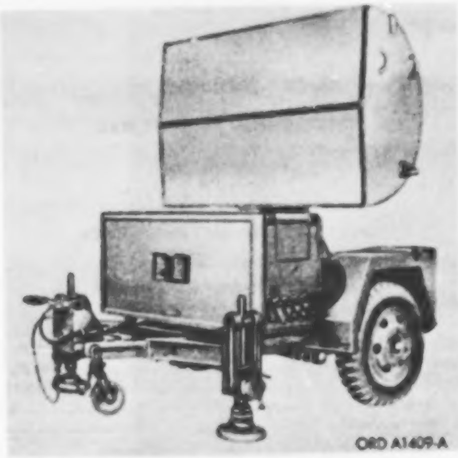
Shipped	
Length	14 ft, 10 in.
Width	6 ft, 3 in.
Height	7 ft, 7 in.
Volume	701.8 cu ft
Gross weight	5,300 lb
Ship tons	17.55

Outside Continental United States

Shipped	
Length	14 ft, 10 in.
Width	6 ft, 3 in.
Height	7 ft, 7 in.
Volume	701.8 cu ft
Gross weight	5,300 lb
Ship tons	17.55

Reference: TM 9-1450-500-10.

RADAR SET, CW, ACQUISITION, TRAILER MOUNTED: AN/MPQ–34(XO–1), AN/MPQ–34(XO–3), AND AN/MPQ–34(XO–4), W/E


ORD A1409-A

Model	Major item Line item No.	Federal stock No.
AN/MPQ-34(XO-1)	4-33624-01	1430-624-4580
AN/MPQ-34(XO-3)	4-33624-02	1430-708-2888
AN/MPQ-34(XO-4)	4-33624-03	1430-714-3314

General

RADAR SET, CW, ACQUISITION, TRAILER MOUNTED: AN/MPQ-34(XO-1), AN/MPQ-34(XO-3), AND AN/MPQ-34(XO-4), w/e, is used in conjunction with the pulse acquisition radars AN/MPQ-35, AN/MPQ-35(XO), and AN/MPQ-35(XO-3) to acquire all potential targets within the battery zone of effectiveness, and to transfer the necessary target data to the battery control central (BCC). The continuous-wave feature (CW) makes the cw acquisition radar especially suitable for search operations at altitudes where ground clutter offers excessive interference to the pulse acquisition radar. The cw acquisition radar generates and transmits a narrow beam of continuous-wave RF energy which is continuously swept in a 360-degree arc by the rotation of the antenna. The five major assemblies of the continuous-wave acquisition radar are the receiver-transmitter group, antenna pedestal, radar set group, motor-generator assembly, and trailer XM389E1.*

Differences among models

Classification: Limited Production (OTCM 37240).

CHARACTERISTICS

Weight	4,340 lb
Length	14 ft, 2 in.
Width	7 ft, 8 in.
Height:	
Upright position	10 ft
Stowed position	7 ft, 7 in.
Tires:	
Size	9.00 x 20
Pressure	45 lb
Brakes	air over hydraulic
Slope emplacement (max)	10 deg
Circle of emplacement (dia)	16 ft, 2 in.

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: TM 9–1430–503–12.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK CARGO: 2½-ton, 6 x 6 M36 or M35.**

STORAGE AND SHIPMENT DATA

FSN 1430–624–4580

Within Continental United States

Shipped	
Length	14 ft, 4 in.
Width	6 ft, 4 in.
Height	8 ft, 1 in.
Volume	734 cu ft
Gross weight	3,900 lb
Ship tons	18.6

Outside Continental United States

Shipped	
Length	14 ft, 4 in.
Width	6 ft, 4 in.
Height	8 ft, 1 in.
Volume	734 cu ft
Gross weight	3,900 lb
Ship tons	18.6

FSN 1430–714–3314

Within Continental United States

Shipped	
Length	16 ft
Width	8 ft, 11 in.
Height	10 ft, 4 in.
Volume	1,474 cu ft
Gross weight	4,790 lb
Ship tons	36.85

Outside Continental United States

Shipped	
Length	16 ft
Width	8 ft, 11 in.
Height	10 ft, 4 in.
Volume	1,474 cu ft
Gross weight	4,790 lb
Ship tons	36.85

FSN 1430–708–2888

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1430-503-12, TM 9-1430-503-35.

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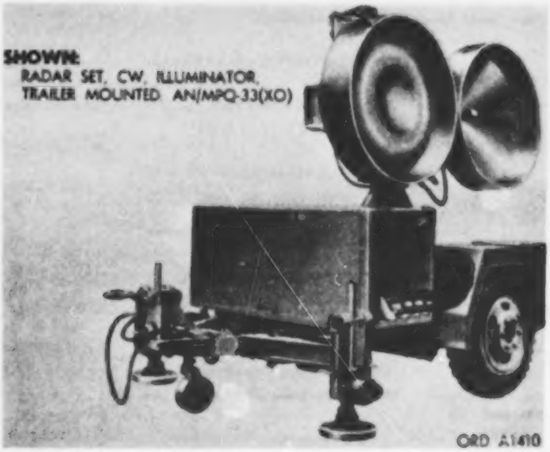
* Characteristics and data will be added in pertinent section at a later date.

** For characteristics and data, see item in section 21.

RADAR SET, CW ILLUMINATOR, TRAILER MOUNTED: AN/MPQ–33(XO–1), AN/MPQ–33(XO–2), AND AN/MPQ–33(XO), W/E



Model	*Major item* Line item No.	Federal stock No.
AN/MPQ-33(XO-1)	4-33626-01	1430-624-4579
AN/MPQ-33(XO-2)	4-33626-02	1430-708-2889
AN/MPQ-33(XO)	4-33626-03	1430-714-3313

General

RADAR SET, CW ILLUMINATOR, TRAILER MOUNTED: AN/MPQ-33(XO-1), AN/MPQ-33(XO-2), AN/MPQ-33(XO), w/e, provides, as its primary function, the homing signal for the missile XM3E1 by maintaining a beam of microwave energy on a designated target. The reflected energy from the target provides the illuminator with information concerning target radial speed, target range, and target position. This information is used by the illuminator to automatically track the target in azimuth and elevation. The automatic tracking together with target radial speed and target range information are used to fulfill the following secondary functions of the illuminator: controlling the launcher boom position in azimuth and elevation, providing the battery control central (BCC) with tactical information, and computing a missile-launch course prior to missile firing. The illuminator consists of six major equipment groups and assemblies mounted on chassis, trailer: 1-ton, 2-wheel XM389E1 *: transmitter group, receiver group, elevation head assembly, antenna pedestal, radar set group, and motor generator assembly.

Differences among models

Data plate location

Classification: Limited Production (OTCM 37240).

CHARACTERISTICS

Weight	5,250 lb
Length, overall (travel condition)	14 ft, 3 in.
Width, overall (travel condition)	7 ft, 10 in.
Height, overall (travel condition)	9 ft, 10 in.
Height, overall (antenna tilted for air travel)	7 ft, 3½ in.
Clearance, overhead (travel condition)	10 ft, 4 in.
Tire size	9.00 x 20
Tire air pressure	45 lb
Brakes	air over hydraulic
Slope emplacement (max)	10 deg
Circle of emplacement (dia.)	16 ft, 2 in.
Diameter of antenna:	
Transmitting	4 ft
Receiving	4 ft

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: See TM 9-1430-504-12.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, CARGO: 2½-ton, 6 x 6, M36 or M35.**

STORAGE AND SHIPMENT DATA

FSN 1430–624–4579

Within Continental United States

Shipped	
Length	16 ft
Width	8 ft, 11 in.
Height	9 ft, 10 in.
Volume	1,430 cu ft
Gross weight	4,880 lb
Ship tons	35.6

Outside Continental United States

Shipped	
Length	16 ft
Width	8 ft, 11 in.
Height	9 ft, 10 in.
Volume	1,430 cu ft
Gross weight	4,880 lb
Ship tons	35.6

FSN 1430–708–2889

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1430–714–3313

Within Continental United States

Shipped	
Length	14 ft, 3 in.
Width	8 ft, 11 in.
Height	7 ft, 3½ in.
Volume	926 cu ft
Gross weight	5,250 lb
Ship tons	23.15

Outside Continental United States

Shipped	
Length	14 ft, 3 in.
Width	8 ft, 11 in.
Height	7 ft, 3½ in.
Volume	926 cu ft
Gross weight	5,250 lb
Ship tons	23.15

References: TM 9-1430-504-12, TM 9-1430-504-35.

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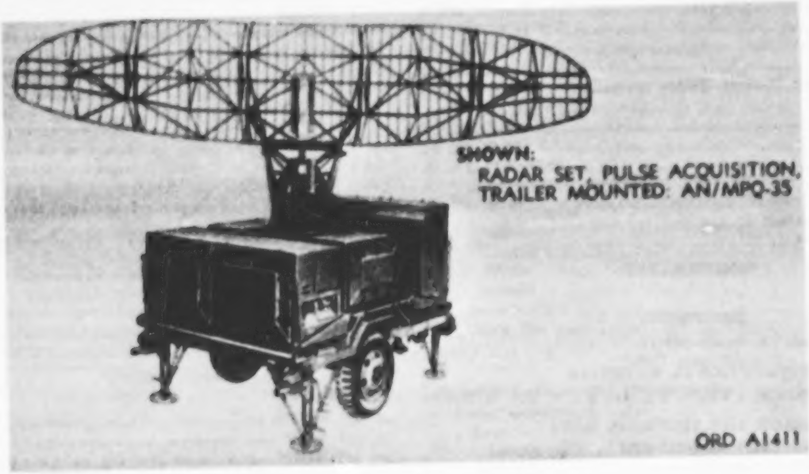
* Characteristics and data, will be added at a later date.

** For characteristics and data, see item in section 21.

RADAR SET, PULSE ACQUISITION, TRAILER MOUNTED: AN/MPQ–35, AN/MPQ–35(XO–3), AND AN/MPQ–35(XO–4), W/E



SHOWN:
RADAR SET, PULSE ACQUISITION, TRAILER MOUNTED: AN/MPQ-35

ORD A1411

Model	*Major item Line item No.*	*Federal stock No.*
AN/MPQ-35	4-33633-01	1430-624-4581
AN/MPQ-35(XO-3)	4-33633-02	1430-708-2895
AN/MPQ-35(XO-4)	4-33633-03	1430-714-3315

General

RADAR SET, PULSE ACQUISITION, TRAILER MOUNTED: AN/MPQ-35, AN/MPQ-35(XO-3), and AN/MPQ-35(XO-4), w/e, provides data necessary for the AIR DEFENSE GUIDED MISSILE: XM3E1 to effectively engage all hostile targets by means of air-search radar which generates and radiates pulses of radio frequency (RF) energy and which receives RF energy reflected from targets within the radiated pattern. The received RF energy is ultimately presented on either the pulse acquisition radar (PAR) or the battery control central (BCC) plan position indicators (PPI's), which display the range and azimuth of the acquired targets. An associated identification friend or foe (IFF) system, located on the PAR, identifies the targets displayed on the indicators. The radar sets AN/MPQ-35 and AN/MPQ-35(XO-3) each consists of a radar set group, high-voltage power supply, antenna group, receiver transmitter group, electronic equipment cooler and CCM amplifier group, pallet assembly, CHASSIS TRAILER: 2-ton, 2-wheel, XM390 *, and trailer jacks.

Differences among models

Data plate location

Classification: Limited production (OTCM 37240).

CHARACTERISTICS

PAR when prepared for road transport:

Weight	7,750 lb
Length	16 ft, 4 in.
Width	8 ft
Height	10 ft
Volume	1,486 cu ft

PAR with antenna reflector and feed horn emplaced:

Weight	8,010 lb
Length	16 ft, 4 in.
Width	22 ft
Height	15 ft

PAR detached from 2-wheel trailer XM390 (antenna refector and feed horn emplaced):

Weight	4,880 lb

PAR detached from 2-wheel trailer XM390—Continued

Length	11 ft, 1 in.
Width	22 ft
Height	12 ft

Receiver-transmitter group cabinet plus equipment:

Weight	1,200 lb
Length	7 ft, 9¾ in.
Width	2 ft, 2 in.
Height	4 ft, 3½ in.

Electrical equipment cabinet plus radar set group and IFF interrogator set and decoder group:

Weight	1,276 lb
Length	7 ft, 11½ in.
Width	3 ft, 1½ in.
Height	3 ft, 3 in.

High voltage power supply cabinet plus equipment:

Weight	200 lb
Length	3 ft, 11½ in.
Width	2 ft, 9½ in.
Height	2 ft, 7½ in.

Electronic equipment cooler and CCM amplifier group cabinet plus equipment:

Weight	380 lb
Length	3 ft, 11½ in.
Width	2 ft, 1 in.
Height	2 ft, 7½ in.

Antenna reflector:

Weight	200 lb
Length	22 ft
Width	6 ft, 4 in.
Height	5 ft, 2 in.

Antenna reflector support and feed horn:

Weight	375 lb
Length	10 ft, 1 in.
Width	3 ft, 6½ in.
Height	6 ft

Antenna pedestal from access cover to outside edge of housing:

Width	2 ft, 6½ in.

Antenna pedestal from access cover to edge of brake assembly handwheel:

Width	2 ft, 7½ in.

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* Characteristics and data will be added at a later date.

CHARACTERISTICS—Continued

Antenna pedestal (equipped):	
Weight	800 lb
Height	3 ft, 1 in.
Pallet:	
Weight	450 lb
Length	10 ft. 11½ in.
Width	8 ft. 1⅛ in.
Height	2 ft. 3½ in.
Chassis trailer: 2-ton, 2-wheel, XM390 (overall dimensions).*	
Weight	3,180 lb
Length	16 ft. 3⅝ in.
Width	8 ft. 1⅛ in.
Height:	
Loaded	3 ft. 8⅝ in.
Floor height (loaded)	2 ft. 10⅝ in.
Ground clearance	1 ft. 5 in.

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: See TM 9–1430–502–12.

INSTRUCTIONAL MATERIAL

PRIME MOVER: TRUCK, CARGO: 2½-ton, 6 x 6, M36 or M35.**

STORAGE AND SHIPMENT DATA

FSN 1430–714–3315

Carloading and marine transportation:	
Radar mounted on trailer:	
Exterior:	
Length	16 ft, 4⅛ in.
Width	8 ft, 1½ in.
Height	10 ft, 1 in.
Gross weight	8,530 lb
Cubic feet	1,342
Case, antenna reflector (right):	
Exterior:	
Length	5 ft, 7 in.
Width	4 ft, 10½ in.
Height	5 ft, 5¼ in.
Gross weight	236 lb
Cubic feet	148
Case, antenna reflector (left):	
Exterior:	
Length	5 ft, 7 in.
Width	4 ft, 10½ in.
Height	5 ft, 5¼ in.
Gross weight	190 lb
Cubic feet	148
Case, antenna reflector (center):	
Exterior:	
Length	5 ft, 9 in.
Width	5 ft, 7½ in.
Height	2 ft, 8 in.
Gross weight	110 lb
Cubic feet	86.3
Case, pallet jacks (right):	
Exterior:	
Length	2 ft, 5¼ in.
Width	1 ft, 11⅝ in.
Height	1 ft, 7 in.
Gross weight	140 lb
Cubic feet	7.6
Case, pallet jacks (left):	
Exterior:	
Length	2 ft, 5¼ in.
Width	1 ft, 11⅝ in.
Height	1 ft, 7 in.
Gross weight	140 lb
Cubic feet	7.6
Aircraft transportation:	
Radar mounted on trailers:	
Exterior:	
Length	16 ft, 4⅛ in.
Width	8 ft, 1½ in.
Height	7 ft, 8 in.
Gross weight	8,373 lb
Cubic feet	1,020
Case, antenna reflector (right):	
Exterior:	
Length	5 ft, 7 in.
Width	4 ft, 10½ in.
Height	5 ft, 5¼ in.
Gross weight	236 lb
Cubic feet	148
Case, antenna reflector (left):	
Exterior:	
Length	5 ft, 7 in.
Width	4 ft, 10½ in.
Height	5 ft, 5¼ in.
Gross weight	190 lb
Cubic feet	148
Case, antenna reflector (center):	
Exterior:	
Length	5 ft, 9 in.
Width	5 ft, 7½ in.
Height	2 ft, 8 in.
Gross weight	110 lb
Cubic feet	86.3
Case, pallet jack (right):	
Exterior:	
Length	2 ft, 5¼ in.
Width	1 ft, 11⅝ in.
Height	1 ft, 7 in.
Gross weight	140 lb
Cubic feet	7.6
Case, pallet jacks (left):	
Exterior:	
Length	2 ft, 5¼ in.
Width	1 ft, 11⅝ in.
Height	1 ft, 7 in.
Gross weight	140 lb
Cubic feet	7.6
Crate, antenna support:	
Exterior:	
Length	9 ft, 8 in.
Width	4 ft, 4 in.
Height	3 ft, 11⅛ in.
Gross weight	400 lb
Cubic feet	165

FSN 1430–708–2895

Carloading and marine transportation:	
Radar mounted on trailer:	
Exterior:	
Length	16 ft, 4 in.
Width	8 ft, 1 in.
Height	8 ft, 6 in.
Gross weight	7,581 lb
Cubic feet	1,122
Reflector carrying case:	
Exterior:	
Length	6 ft, 4 in.
Width	5 ft, 1 in.
Height	3 ft, 10½ in.
Gross weight	78 lb
Cubic feet	125

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* Characteristics and data to be added at a later date.

** *For* characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA—Continued

FSN 1430-708-2895

Carloading and marine transportation—Continued	
Center section crate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	154 lb
Cubic feet	90
Right intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in:
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Left Intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Right pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10½ in.
Gross weight	128 lb
Cubic feet	9.5
Left pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10½ in.
Gross weight	128 lb
Cubic feet	9.5
Aircraft transportation:	
Radar mounted on trailer:	
Exterior:	
Length	16 ft, 4 in.
Width	8 ft, 1 in.
Height	7 ft, 7½ in.
Gross weight	7,519 lb
Cubic feet	1,007
Reflector support removed:	
Exterior:	
Length	5 ft
Width	3 ft, 8 in.
Height	2 ft, 1⅝ in.
Gross weight	183 lb
Cubic feet	39
Reflector carrying case:	
Exterior:	
Length	6 ft. 3 in.
Width	5 ft. 1 in.
Height	3 ft. 10½ in.
Gross weight	78 lb
Cubic feet	125
Center section crate:	
Exterior:	
Length	6 ft. 7 in.
Width	4 ft. 5 in.
Height	3 ft. 1 in.
Gross weight	164 lb
Cubic feet	90
Right intermediate:	
Exterior:	
Length	6 ft. 7 in.
Width	4 ft. 5 in.
Height	3 ft. 1 in.
Gross weight	151 lb
Cubic feet	90
Aircraft transportation—Continued	
Left intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Right pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10½ in.
Gross weight	128 lb
Cubic feet	9.5
Left pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10½ in.
Gross weight	128 lb
Cubic feet	9.5

FSN 1430-424-4581

Carloading and marine transportation:	
Radar mounted on trailer:	
Exterior:	
Length	16 ft, 4 in.
Width	8 ft, 1 in.
Height	8 ft, 6 in.
Gross weight	7,581 lb
Cubic feet	1,122
Reflector carrying case:	
Exterior:	
Length	6 ft, 4 in.
Width	5 ft, 1 in.
Height	3 ft. 10½ in.
Gross weight	78 lb
Cubic feet	125
Center section crate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	164 lb
Cubic feet	90
Right intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Left intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Right pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10 ½ in.
Gross weight	128 lb
Cubic feet	9.5
Left pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft. 10½ in.

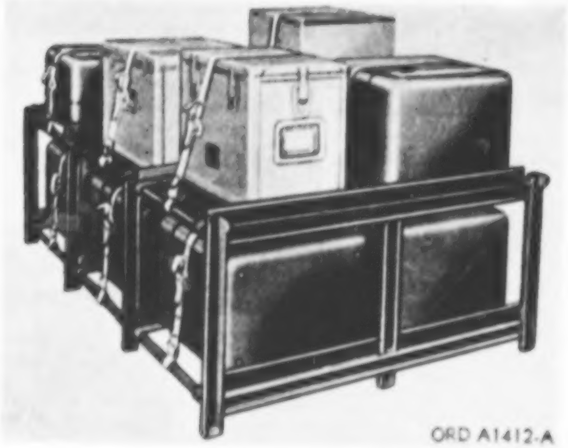
STORAGE AND SHIPMENT DATA—Continued

FSN 1430-624-4581

Carloading and marine transportation—Continued	
Left pallet jacks—Continued	
Gross weight	128 lb
Cubic feet	9.5
Aircraft transportation:	
Radar mounted on trailer:	
Exterior:	
Length	16 ft, 4 in.
Width	8 ft, 1 in.
Height	7 ft, 7½ in.
Gross weight	7,519 lb
Cubic feet	1,007
Reflector support removed:	
Exterior:	
Length	5 ft
Width	3 ft, 8 in.
Height	2 ft, 1⅝ in.
Gross weight	183 lb
Cubic feet	59
Reflector carrying case:	
Exterior:	
Length	6 ft, 4 in.
Width	5 ft, 1 in.
Height	3 ft, 10½ in.
Gross weight	78 lb
Cubic feet	125
Center section crate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Aircraft transportation—Continued	
Center section crate—Continued	
Height	3 ft, 1 in.
Gross weight	164 lb
Cubic feet	90
Right intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Left intermediate:	
Exterior:	
Length	6 ft, 7 in.
Width	4 ft, 5 in.
Height	3 ft, 1 in.
Gross weight	151 lb
Cubic feet	90
Right pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10½ in.
Gross weight	128 lb
Cubic feet	9.5
Left pallet jacks:	
Exterior:	
Length	2 ft, 11 in.
Width	1 ft, 8½ in.
Height	1 ft, 10½ in.
Gross weight	128 lb
Cubic feet	9.5

Reference: TM 9-1430-502-12.

SHOP EQUIPMENT, GUIDED MISSILE REMOTE CONTROL SYSTEM, ORGANIZATIONAL MAINTENANCE: W/E


ORD A1412-A

Model	*Secondary item* *Line item No.*	*Federal stock No.*
	4-40136-03	4935-690-5962
	4-40136-01	4935-624-4588

General

SHOP EQUIPMENT, GUIDED MISSILE REMOTE CONTROL SYSTEM, ORGANIZATIONAL MAINTENANCE: w/e, contains the ground test equipment needed to check out the ground-based items which, with the missile, comprise the complete HAWK missile battery. The ground equipment test shop is used to perform periodic checks of the ground equipment and detect malfunctions. There are 12 test sets which make up the ground equipment test shop—six of these test sets are common items and six are peculiar to the HAWK air defense guided missile system. The six common test sets are RF voltmeter AN/USM/69, RF generator AN/URM/64, multimeter TS-352/U, echo box TS-172A/UP, oscilloscope TS-239/UP, and VTUM TS-375/U. The six test sets peculiar to the HAWK system are radar target simulator, launcher test set, missile simulator, receiver test set, signal generator, and transmitter test set. All this equipment is strapped on a pallet for air or ground transportation. On the ground, this equipment is transported by a $2\frac{1}{2}$-ton truck M36 or M35.

Differences among models

Data plate location

Classification: Limited production (OTCM 37240).

CHARACTERISTICS

Weight:	
Pallet empty	195 lb
Pallet loaded	1,000 lb
Emplaced:	
Length	6 ft, 7 in.
Width	4 ft, 2 in.
Height	3 ft, $6\frac{3}{4}$ in.
March order:	
Length	6 ft, 7 in.
Width	4 ft, 2 in.
Height	1 ft, $11\frac{7}{8}$ in.

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: See TM 9-4935-501-12/1

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 4935-690-5962

Within Continental United States

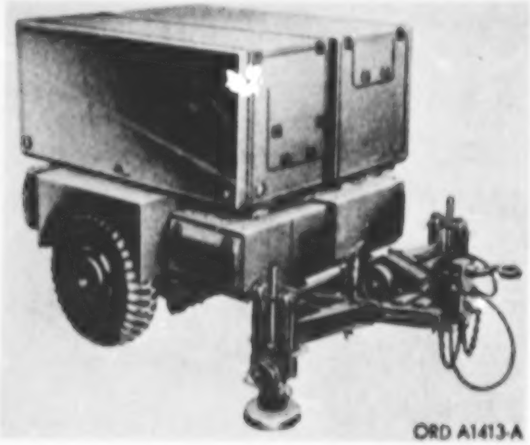
Shipped	
Length	7 ft, $2\frac{1}{2}$ in.
Width	4 ft, $8\frac{1}{4}$ in.
Height	4 ft, $\frac{1}{2}$ in.
Volume	138 cu ft
Gross weight	1,025 lb
Ship tons	3.45

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1400-500-10, TM 9-4935-501-12/1, TM 9-4935-501-12/2, TM 9-4935-501-12/3.

SHOP EQUIPMENT, GUIDED MISSILE, ORGANIZATIONAL MAINTENANCE (Missile Test Shop): AN/MSM-43(XO), TRAILER MOUNTED, W/E



ORD A1413-A

Model	*Secondary item Line item No.*	*Federal stock No.*
Trailer-Mounted (1957 configuration).	4-40120-01	4935-624-4587
(1958 configuration)	4-40120-02	4935-708-2890
AN/MSM-43 (XO) palletized (1959 configuration).	4-40120-03	4935-714-3318

General

SHOP EQUIPMENT, GUIDED MISSILE, ORGANIZATIONAL MAINTENANCE (Missile Test Shop): AN/MSM-43(XO), TRAILER MOUNTED, w/e, provides the facilities necessary to determine the operational readiness of the missile XM3E1. The missile test shop consists of a guided missile maintenance kit, guided missile test set group, and a chassis trailer: 1-ton, 2-wheel, XM389 (modified)*. Four systems in the missile test shop (RF hydraulic, test control and monitor, and compressed air) control and monitor the generation and response of simulated signals from the missile test shop which are programed through the missile XM3E1. These signals simulate those which the missile XM3E1 normally receives from the cw illuminator radar and from the target in the form of reflected energy.

Differences among models

Data plate location

Classification: Limited production (OTCM 37240).

CHARACTERISTICS

Emplaced:	
Weight	5,163 lb
Length	14 ft, 10 in.
Width	8 ft, 10 in.
Height	7 ft, 1⅝ in.
March order:	
Length	14 ft, 4½ in.
Width	7 ft, 10½ in.
Height	7 ft, 1⅝ in.
Guided missile test set group:	
Electrical equipment cabinet:	
Weight	1,100 lb
Length	7 ft, 7 in.
Width	3 ft
Height	3 ft, ⅝ in.
Test set group storage cabinet:	
Weight	550 lb
Length	7 ft, 8⅝ in.
Width	3 ft, 8¼ in.
Height	1 ft, 5 1/16 in.
Guided missile maintenance kit:	
Maintenance kit storage cabinet:	
Weight	900 lb
Length	7 ft, 7 in.
Width	3 ft
Height	3 ft, 3⅜ in.
Work and storage cabinet:	
Weight	550 lb
Length	7 ft, 8⅝ in.
Width	3 ft, 8¼ in.
Height	1 ft, 5 1/16 in.
Chassis trailer: 1-ton 2-wheel, XM389E1**:	
Weight	2,162 lb

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: TM 9-4935-500-12.

INSTRUCTIONAL MATERIAL

PRIME MOVER

Truck cargo: 2½-ton, 6 x 6, M36 or M35*

STORAGE AND SHIPMENT DATA

FSN 4935-714-3318

Within Continental United States

Shipped	
Length	14 ft, 4½ in.
Width	7 ft, 10½ in.

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*Characteristics and data will be added at a later date.

** For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA—Continued

FSN 4935-714-3318

Within Continental United States—Continued

Shipped—Continued	
Height	7 ft, 1⅝ in.
Volume	808.4 cu ft
Gross weight	5,007 lb
Ship tons	20.13

Outside Continental United States

Shipped	
Length	14 ft, 4½ in.
Width	7 ft, 10⅛ in.
Height	7 ft, 1⅝ in.
Volume	808.4 cu ft
Gross weight	5,007 lb
Ship tons	20.13

FSN 4935-624-4587

Within Continental United States

Shipped	
Length	14 ft, 4 in.
Width	6 ft, 4 in.
Height	7 ft, 2 in.
Volume	650 cu ft
Gross weight	4,600 lb
Ship tons	20.13

Outside Continental United States

Shipped	
Length	14 ft, 4 in.

Outside Continental United States—Continued

Shipped—Continued	
Width	6 ft, 4 in.
Height	7 ft, 2 in.
Volume	650 cu ft
Gross weight	4,600 lb
Ship tons	20.13

FSN 4935-708-2899

Within Continental United States

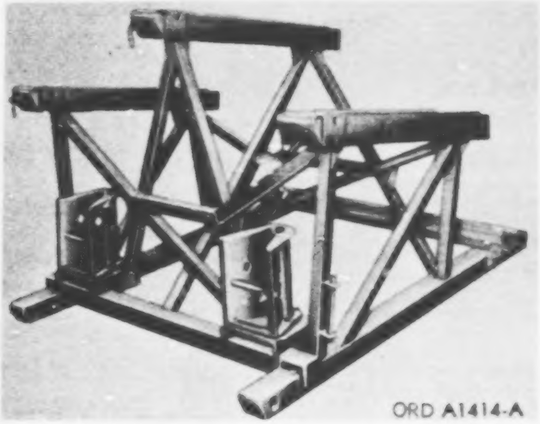
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-4935-500-12, TM 9-1400-500-10.

PALLET, LOADING AND STORAGE, GUIDED MISSILE: XM1



ORD A1414-A

Model	*Major item* *Line item No.*	*Federal stock No.*
XM1	4-28224-01	1450-628-4586
	4-28224-02	1450-665-5157
	4-28224-03	1450-768-7045

General

PALLET, LOADING AND STORAGE, GUIDED MISSILE: XM1, , and , is designed to hold three ready-to-fire missiles which can be quickly transferred by loader to a launcher. It can be used either trailer-mounted, truck-mounted, or detached. Index fittings provide attachment points so that a pallet may be picked up and moved by the loader. Loaded trailer or truck-mounted pallets may be used in movements relocating the battery in the field.

Differences among models

Data plate location

Classification: Limited production (OTCM 37240).

CHARACTERISTICS

Weight:	
Empty	943 lb
Missiles (3) aboard	4,828 lb
Length (w/o missiles)	80⅛ in.
Width (w/o missiles)	68 1/16 in.
Height (w/o missiles)	50⅜ in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1450-628-4586 and FSN 1450-665-5157

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1450-768-7045

Within Continental United States

Shipped	
Length	6 ft, 8⅛ in.
Width	5 ft, 8⅜ in.
Height (skid mounted)	4 ft, 8⅜ in.
Volume	176.3 cu. ft
Gross Weight	1,000 lb
Ship Tons	4.41

Outside Continental United States

Shipped 1 pallet crated	
Length	7 ft, 8⅛ in.
Width	6 ft, 8 1/16 in.
Height	5 ft, 8⅜ in.
Volume	264 cu ft
Gross Weight	1,420 lb
Ship Tons	6.60

GENERATOR SET: HF45D

(Data to be published at a later date.)

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

EQUIPMENT

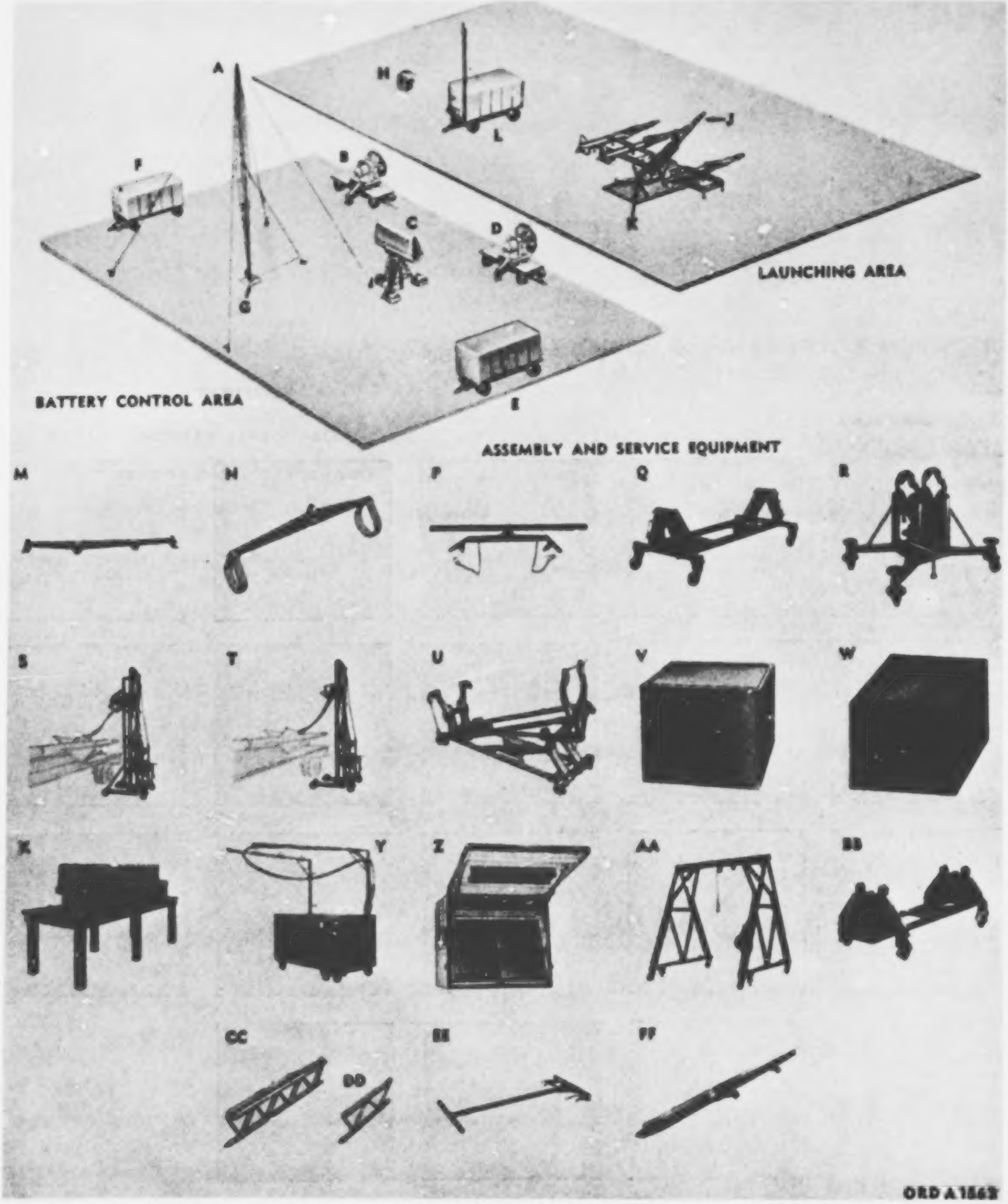
INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References:

AIR DEFENSE GUIDED MISSILE SYSTEM NIKE-AJAX

(Includes specially designed components of guided missile remote control systems; nonairborne guided missile launchers; specially designed trucks for use in transporting guided missiles; specially designed hoisting beams; checkout equipment and test equipment specially designed for use with guided missiles and guided missile remote control systems.)


A
H
L
J
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B
K
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D
LAUNCHING AREA
G
BATTERY CONTROL AREA
E
ASSEMBLY AND SERVICE EQUIPMENT
M
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ORD A1562

BATTERY CONTROL AREA

A—ANTENNA-MAST GROUP: OA-739/MSW-1
B—ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA-654/MPA-4 through OA-654G/MPA-4
C—ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION: OA-653/MS
D—ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-655/MPA-4 through OA-655G/MPA-4
E—DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA-7, AN/MSA-7A, AN/MSA-17, AN/MSA-17A
F—TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-4 and AN/MPA-4A
G—TEST SET, RADAR: TS-847/MSW-1 and TS-847A/MSW-1

LAUNCHING AREA

H—CONTROL INDICATOR: C-1488/MSE-2
J—GUIDED MISSILE, AIR DEFENSE: M1
K—LAUNCHER, GUIDED MISSILE: M22, M22A1, M22A2, and M22A3
L—SIMULATOR STATION, RADAR SIGNAL, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: AN/MPQ-36 (15D2)

ASSEMBLY AND SERVICE EQUIPMENT

M—BEAM, HOISTING, GUIDED MISSILE
N—BEAM, ASSEMBLY, BOOSTER
P—BEAM, ASSEMBLY, WARHEAD
Q—TRUCK, GUIDED MISSILE ROCKET MOTOR: M254
R—TRUCK, GUIDED MISSILE BODY SECTION: M255
S—SERVICER, ACID, GUIDED MISSILE: M2
T—SERVICER, FUEL, GUIDED MISSILE: M3 and M3A1
U—CARRIAGE, MISSILE HANDLING: M28
V—DRAINING KIT, FUEL, GUIDED MISSILE: M54
W—DRAINING KIT, OXIDIZER, GUIDED MISSILE: M53
X—RACK, BATTERY: MT-1498/G
Y—STAND, TEST, HYDRAULIC SYSTEM, MISSILE: M14
Z—TEST SET, GUIDED MISSILE: AN/DSM-12, AN/DSM-12A, and AN/DSM-12B
AA—TRUCK, INERT GUIDED MISSILE: M257
BB—TRUCK, INERT GUIDED MISSILE: M256
CC—SIDE TRUSS, LOADING RACK, GUIDED MISSILE:
DD—END TRUSS, LOADING RACK, GUIDED MISSILE:
EE—DRAWBAR, TRUCK, BRACKET, HAND:
FF—RAIL, LAUNCHING AND HANDLING: M1, M1A1, and M1A2

Page
ANTENNA-MAST GROUP: OA-739/MSW-1, w/e 19-23
ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION: OA-653/MS, w/e 19-25
ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA-654/MPA-4 through OA-654G/MPA-4 19-26
ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-655/MPA-4 through OA-655G/MPA-4, w/e 19-27
BEAM, HOISTING, GUIDED MISSILE: 19-28
BEAM ASSEMBLY, BOOSTER 19-29
BEAM ASSEMBLY, WARHEAD 19-30
CARRIAGE, MISSILE HANDLING: M28 19-31
CONTROL INDICATOR: C-1488/MSE-2 19-32
CONTROL INDICATOR: C-1487/MSE-2 19-33
DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA-7, AN/MSA-7A, AN/MSA-17, AN/MSA-17/A 19-34
DRAINING KIT, FUEL, GUIDED MISSILE: M54 19-35
DRAINING KIT, OXIDIZER, GUIDED MISSILE: M53 19-36
DRAWBAR, TRUCK, BRACKET, HAND: 19-37
ELECTRICAL EQUIPMENT INSTALLATION, LAUNCHER-LOADER: (ORD No. 8001527) 19-38
ELECTRONIC SHOP, TRAILER MOUNTED: M304 and M304A1, w/e 19-39
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INSULATION BLANKET, THERMAL: (ORD No. 8166016) 19-44
KIT WINTERIZATION, GUIDED MISSILE LAUNCHER: 19-45
LAUNCHER-LOADER, GUIDED MISSILE: M26, M26A1, M26A2, and M26A3, w/e 19-46
LAUNCHER, GUIDED MISSILE: M22, M22A1, M22A2, and M22A3 19-47
LAUNCHER, MONORAIL, GUIDED MISSILE: M28A2 and M28A3 19-48
LAUNCHER, MONORAIL, GUIDED MISSILE: M29A2 and M29A3 19-49
LAUNCHING CONTROL GROUP, TRAILER MOUNTED: OA-867/MSE-2 and OA-867A/MSE-2, w/e 19-50
MODIFICATION KIT, GUIDED MISSILE LAUNCHING SECTION: 19-51
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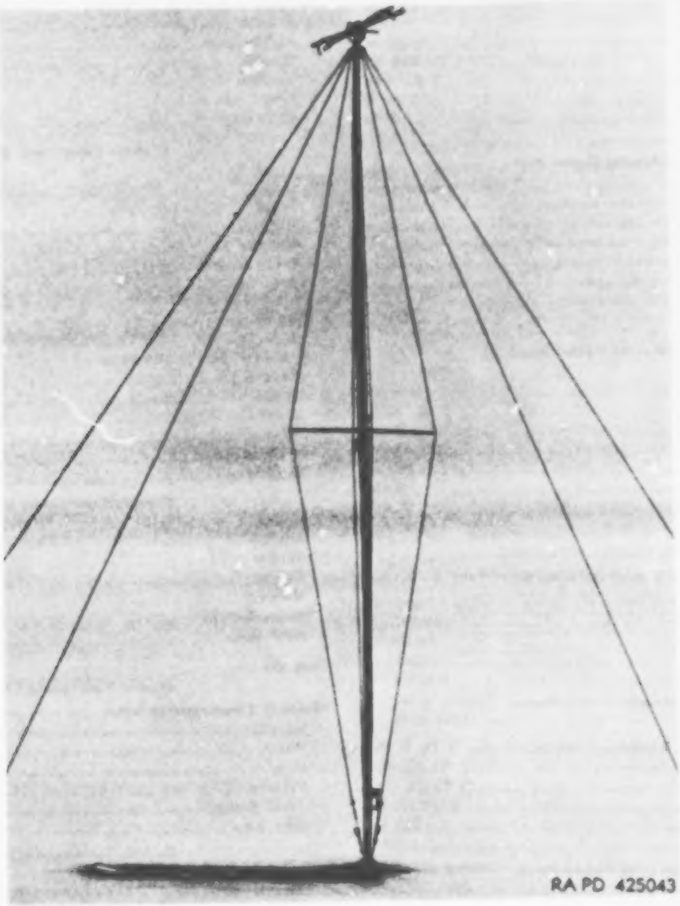
RUNNING GEAR, LAUNCHER 19-53
RAIL, LAUNCHING AND HANDLING: M1, M1A1, and M1A2, w/e 19-54
SERVICER, ACID, GUIDED MISSILE: M2, w/e 19-55
SERVICER, FUEL, GUIDED MISSILE: M3A1, w/e 19-57
SHIELD, GUIDED MISSILE LAUNCHER: M1 19-59
SIMULATOR STATION, RADAR SIGNAL, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: AN/MPQ-36 (15D2) 19-60
SIMULATOR GROUP: OA-758/MSE-2 19-61
STAND, TEST, HYDRAULIC SYSTEM, MISSILE: M14 19-62
STOWAGE SET ASSEMBLY, LAUNCHER: 19-63
TEST SET, GUIDED MISSILE: AN/DSM-12, AN/DSM-12A, and AN/DSM-12B 19-64
TEST SET, ELECTRIC CIRCUIT: TS-1053/G 19-65
TEST SET, RADAR: TS-847/MSW-1 and TS-847A/MSW-1 19-66
TEST SET, RADAR: AN/MPM-28, AN/MPM-28A, and AN/MPM-28B 19-67
TEST SET GROUP, GUIDED MISSILE: OA-767B/DSM 19-68
TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-4 and AN/MPA-4A 19-69
TRUCK, GUIDED MISSILE BODY SECTION: M255 19-70
TRUCK, GUIDED MISSILE ROCKET MOTOR: M254 19-71
TRUCK, INERT GUIDED MISSILE: M256 19-72
TRUCK, INERT GUIDED MISSILE: M257 19-73
END TRUSS, LOADING RACK, GUIDED MISSILE: 19-74
SIDE TRUSS, LOADING RACK, GUIDED MISSILE: 19-75

The equipment required to complete the system, which includes maintenance, repair, and check-out equipment especially designed for use with guided missiles and guided missile control systems, will be added at a later date.

ANTENNA-MAST GROUP: OA–739/MSW–1, W/E


RA PD 425043

Model	*Major item Line item No.*	*Federal stock No.*
OA–739/MSW–1	4–00195–00	1430–568–8169

General
ANTENNA-MAST GROUP: OA–739/MSW–1, W/E

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length	140 ft
Width	140 ft
Height of mast above ground level	61 ft, 8 in.
Length of boom	20 ft, 6 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4–7.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Box #1

Within Continental United States

Shipped 1 mast per 10 boxes

Length	10 ft, 3¾ in.
Width	2 ft
Height	11¾ in.
Volume	19.5 cu ft
Gross weight	300 lb
Ship tons	0.4875

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

STORAGE AND SHIPMENT DATA—Continued

Box #2 and #3

Within Continental United States

Shipped 1 mast per 10 boxes

Length	2 ft, 11 in.
Width	2 ft, 10½ in.
Height	1 ft, 2 in.
Volume	9.75 cu ft
Gross weight	172 lb
Ship tons	0.244

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #4

Within Continental United States

Shipped 1 mast per 10 boxes

Length	6 ft, 4¼ in.
Width	2 ft, 7 in.
Height	1 ft, 6 in.
Volume	24.6 cu ft
Gross weight	226 lb
Ship tons	0.615

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #5

Within Continental United States

Shipped 1 mast per 10 boxes

Length	9 ft, 5 in.
Width	2 ft, 4⅝ in.
Height	2 ft, 2¾ in.
Volume	54.10 cu ft
Gross weight	200 lb
Ship tons	1.3525

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #6

Within Continental United States

Shipped 1 mast per 10 boxes

Length	9 ft, 7 in.
Width	3 ft, 7¾ in.
Height	11¼ in.
Volume	32.7 cu ft
Gross weight	200 lb
Ship tons	0.8175

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #7

Within Continental United States

Shipped 1 mast per 10 boxes

Length	2 ft, 5 in.
Width	1 ft, 10½ in.
Height	1 ft, 4 in.
Volume	5.6 cu ft
Gross weight	178 lb
Ship tons	0.14

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #8

Within Continental United States

Shipped 1 mast per 10 boxes

Length	8 ft, 5½ in.
Width	3 ft, 6½ in.
Height	1 ft, 9½ in.
Volume	53.7 cu ft
Gross weight	560 lb
Ship tons	1.342

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #9

Within Continental United States

Shipped 1 mast per 10 boxes

Length	3 ft, 5⅝ in.
Width	1 ft, 6⅛ in.
Height	1 ft, 1 in.
Volume	5 cu ft
Gross weight	212 lb
Ship tons	0.15

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box #10

Within Continental United States

Shipped 1 mast per 10 boxes

Length	9 ft, 4 in.
Width	1 ft, 6 in.
Height	1 ft
Volume	14 cu ft
Gross weight	200 lb
Ship tons	0.35

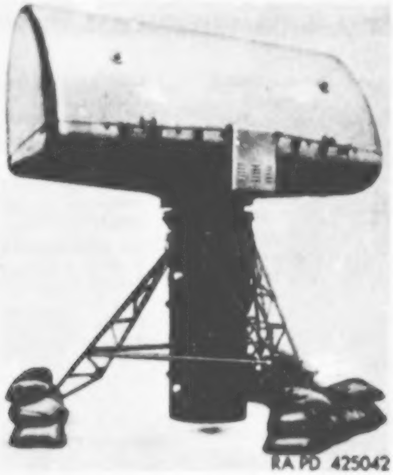
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y4-7, SM 9-5-1430, 40, 50.

ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION: OA–653/MS, W/E



RA PD 425042

Model	*Major item Line item No.*	*Federal stock No.*
OA–653/MS	4–00207–00	1430–698–3114

General

Differences among models

Data plate location

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Weight	2,343 lb
Length	16 ft.
Width	16 ft.
Height	15 ft.
Clearance between ground level and bottom of acquisition antenna	8 ft. 6 in.
Turning diameter of antenna	16 ft.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4-5

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 antenna group per crate and 4 boxes

Length	
Width	
Height	
Volume	1,075 cu ft
Gross weight	5,039.0 lb
Ship tons	26.875

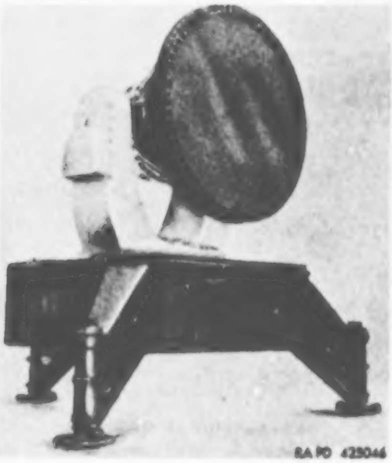
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y4-5, SM 9-5-1430, 40, 50; TM 9-5010-2-1.

ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA-654/MPA-4, OA-654A/MPA-4, OA-654B/MPA-4, OA-654C/MPA-4, OA-654D/MPA-4, OA-654E/MPA-4, OA-654F/MPA-4, OA-654G/MPA-4



Model	Major item Line item No.	Federal stock No
OA-654/MPA-4	4-00214-10	1430-558-8170
OA-654A/MPA-4	4-00214-05	1430-563-0215
OA-654B/MPA-4	4-00214-15	1430-563-0216
OA-654C/MPA-4	4-00214-25	1430-563-0217
OA-654D/MPA-4	4-00214-20	1430-558-8171
OA-654E/MPA-4	4-00214-30	1430-563-0218
OA-654F/MPA-4	4-00214-35	1430-563-0219
OA-654G/MPA-4	4-00214-40	1430-563-0220

General

ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA-654/MPA-4, consists of missile tracking antenna-receiver-transmitter group OA-858/MPA-4 and TRAILER LOW-BED: antenna mount, M260.* Similarly, OA-654A/MPA-4 consists of OA-858A/MPA-4 and M260*; OA-654B/MPA-4 consists of OA-858B/MPA-4 and M260*; OA-654C/-MPA-4 consists of OA-858C/MPA-4 and M260*; OA-654D/MPA-4 consists of OA-858/MPA-4 and M260A1*; OA-654E/MPA-4 consists of OA-858A/MPA-4 and M260A1*; OA-654F/MPA-4 consists of OA-858B/MPA-4 and M260A1*; and OA-654G/MPA-4 consists of OA-858C/MPA-4 and M260A1.

Differences among models

Data plate location

Classification

OA-654/MPA-4 .... Standard B(OTCM 36841)
Other models .... No type classification

CHARACTERISTICS

Trailer-mounted missile track antenna-receiver-transmitter group:
Weight .... 10,980 lb
Length .... 28 ft
Width .... 8 ft
Height .... 14 ft

Missile track antenna-receiver-transmitter group:
Weight .... 5,980 lb
Length .... 18 ft
Width .... 10 ft, 6 in
Height .... 14 ft

Track antenna and lens mounting:
Weight .... 186 lb
Length .... 8 ft, 4 in.
Width .... 6 ft, 9 in.
Height .... 6 ft, 9 in.
Turning dia. of track antenna .... 10 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-4, Section I.

STORAGE AND SHIPMENT DATA

OA-654/MPA-4:

Within Continental United States

Shipped
Length .... 28 ft
Width .... 8 ft
Height .... 14 ft
Volume .... 3,136 cu ft
Gross weight .... 10,960.0 lb
Ship tons 78.4

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

OA-654A/MPA-4 to OA-654G/MPA-4 inclusive:

Within Continental United States

Shipped
Length .... 21 ft, 8⅝ in.
Width .... 7 ft, 11½ in.
Height .... 8 ft, 11 in.
Volume .... 1,555 cu ft
Gross weight .... 9,906.0 lb
Ship tons 38.875

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-5010-2-1, SM 9-5-1430, 40, 50; SNL Y-4, Section 1.

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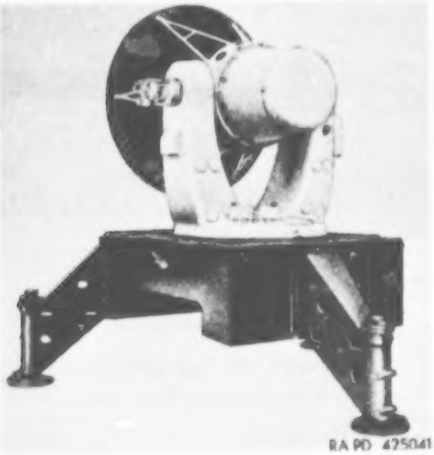
*For data and characteristics, see item in section 22.

ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-655/MPA-4, OA-655A/MPA-4, OA-655B/MPA-4, OA-655C/MPA-4, OA-655D/MPA-4, OA-655E/MPA-4, OA-655F/MPA-4, AND OA-655G/MPA-4, W/E



RA PD 475041

Model	Major item Line item No.	Federal stock No.
OA-655/MPA-4	4-00219-10	1430-568-8172
OA-655A/MPA-4	4-00219-05	1430-563-0213
OA-655B/MPA-4	4-00219-15	1430-563-0214
OA-655C/MPA-4	4-00219-25	1430-563-0221
OA-655D/MPA-4	4-00219-20	1430-047-3802
OA-655E/MPA-4	4-00219-30	1430-563-0224
OA-655F/MPA-4	4-00219-35	1430-563-0223
OA-655G/MPA-4	4-00219-40	1430-563-0222

General

ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-655/MPA-4, OA-655A/-MPA-4, OA-655B/MPA-4, OA-655C/MPA-4, OA-655D/MPA--4, OA-655E/MPA-4, OA-655F/MPA-4, or OA-655G/MPA-4, provides continuous target position information to the computer group of the director trailer. Antenna-receiver-transmitter group, target tracking, trailer mounted OA-655/MPA-4 consists of target tracking antenna-receiver-transmitter OA-859/MPA-4 and TRAILER LOW-BED: antenna mount, M260.* Similarly, OA-655A/MPA-4 consists of OA-859/MPA-4 and M260;* OA-655B/MPA-4 consists of OA-859B/MPA-4 and M260;* OA-655C/MPA-4 consists of OA-859C/-MPA-4 and M260;* OA-655D/MPA-4 consists of OA-859/MPA-4 and M260A1;* OA-655E/MPA-4 consists of OA-859A/MPA-4 and M260A1;* OA-655F/MPA-4 consists of OA-859B/MPA-4 and M260A1;* and OA-655G/MPA-4 consists of OA-859C/MPA-4 and M260A1.*

Differences among models

Data plate location

Classification

OA-655/MPA-4	Standard B (OTCM 36841)
Other Models	No type classification.

CHARACTERISTICS

Trailer-mounted target track antenna-receiver-transmitter group:	
Weight	10,950 lb
Length	21 ft, 4 in.
Width	8 ft
Height	10 ft, 9 in.
Target track antenna-receiver-transmitter group:	
Weight	5,950 lb
Length	18 ft
Width	10 ft, 6 in.
Height	14 ft
Track antenna and lens mounting:	
Weight	156 lb
Length	3 ft, 4 in.
Width	6 ft, 9 in.
Height	6 ft, 9 in.
Turning diameter of track antenna	10 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4-9.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

OA-655/MPA-4, OA-655E/MPA-4 to OA-655G/MPA-4 inclusive:

Within Continental United States

Shipped	
Length	21 ft, 3⅝ in.
Width	7 ft, 11½ in.
Height	8 ft, 11 in.
Volume	1535.0 cu ft
Gross weight	9,906.0 lb
Ship tons	38,375

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

OA-655A/MPA-4, OA-655B/MPA-4, OA-655C/MPA-4, and OA-655D/MPA-4:

Within Continental United States

Shipped	
Length	28 ft
Width	8 ft
Height	14 ft
Volume	3136.0 lb
Gross weight	10,950.0 lb
Ship tons	78.4

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNLY 4-9, TM 9-5010-2-1, SM 9-5-1430, 40, 50.

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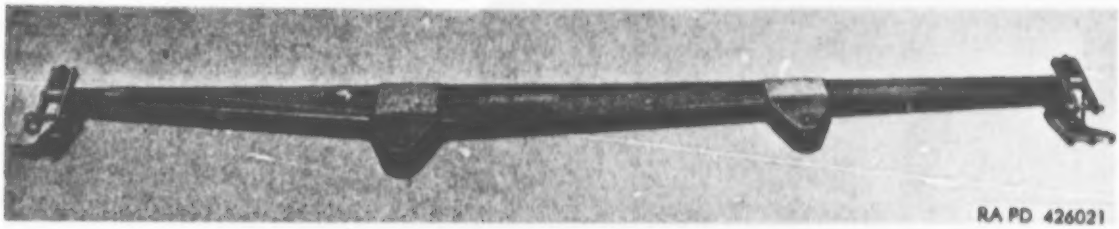
*For characteristics and data, see item in section 22.

BEAM, HOISTING, GUIDED MISSILE:



RA PD 426021

Model	*Secondary item* *Line item No.*	*Federal stock No.*
		1450–800–8041

General

BEAM, HOISTING, GUIDED MISSILE: is used in conjunction with the inert guided missile truck[*] or a mobile crane to lift either the missile body or the entire round. The beam is welded steel, with two lift points and four hoist-link assemblies which attach to the missile handling ring segments. A safety ball-lock pin is attached by chain to each hoist-link. Either of the two lift points can be used, depending on the load to be lifted.

Differences among models

Data plate location

A metal identification plate is attached on the side of the hoisting beam.

Classification:

CHARACTERISTICS

Weight	75 lb
Height, overall	1 ft, ⅛ in.
Length (front to rear)	7 ft, 6 in.
Width, total	7 in.

PERFORMANCE

Capacity, rated load	1,400 lb

EQUIPMENT

Basic Issue Items: See ORD 7 SNL J–738, Sec. 35

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	7 ft, 11 in.
Width	1 ft, 1⅛ in.
Height	8⅝ in.
Volume	6.15 cu ft
Gross weight	128 lb
Ship tons	0.15

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–9502–3.

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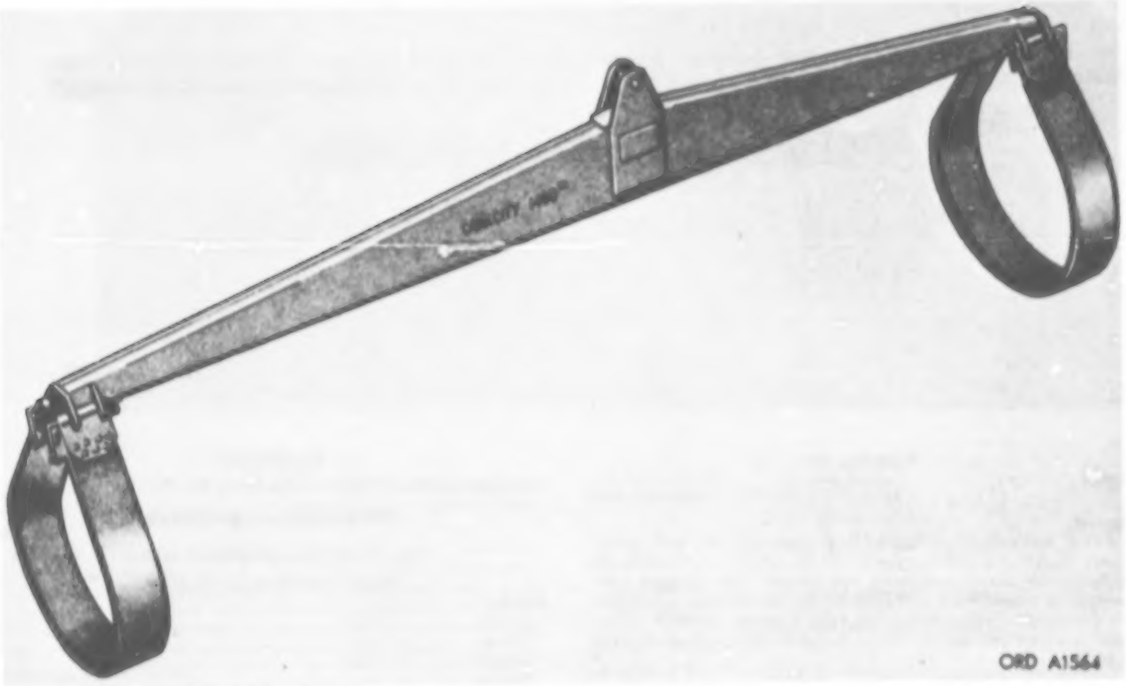
[*] For characteristics and data, see item in pages 19–72 and 19–73.

BEAM ASSEMBLY, BOOSTER



ORD A1564

Model	*Secondary item* *Line item No.*	*Federal stock No.*
		1450-388-9652

General

BEAM ASSEMBLY, BOOSTER, is used in conjunction with the inert guided missile truck or a mobile crane, to place the booster on the launching and handling rail* during assembly of the complete round, and during the installation of the booster on the guided missile rocket motor truck.* The beam is welded steel to which two slings are attached by sling pins. When the beam is in use, the forward sling fits around the body of the booster just aft of the head; the rear sling fits just forward of the booster shroud.

Differences among models

Data plate location

The identification plate is attached to the main section of the booster beam assembly.

Classification:

CHARACTERISTICS

Weight	68 lb
Height, overall	1 ft, 1/8 in.
Length (front to rear)	8 ft, 2 in.
Width, total	5 in.

PERFORMANCE

Capacity, rated load	1,400 lb

EQUIPMENT

Basic Issue Items: See ORD 7 SNL J-738, Sec. 36

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	8 ft, 3 in.
Width	1 ft
Height	3 in.
Volume	2.06 cu ft
Gross weight	150 lb
Ship tons	0.05

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-3.

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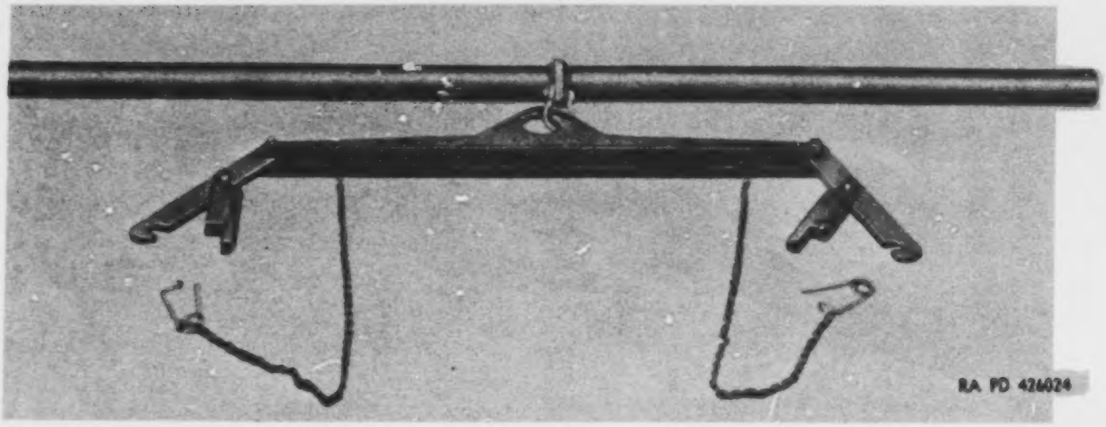
* For characteristics and data, see item in page 19-71.

BEAM ASSEMBLY, WARHEAD


RA PD 426024

Model	*Secondary item* *Line item No.*	*Federal stock No.*
		1450-800-3132

General

BEAM ASSEMBLY, WARHEAD, is used with the inert guided missile truck* or a mobile crane to lift the center and aft warheads of the missile during installation and removal. The warhead beam assembly is a steel beam with a center link for hoisting and a hook for attaching to warheads on each end. A handle assembly is provided to enable two men to lift the warheads when a truck or crane is not available.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	3 lb
Height, overall	4 in.
Length (front to rear)	1 ft, 9 in.
Width, total	2 in.

PERFORMANCE

Capacity, rated load	240 lb

*For characteristics and data, see item in pages 19-72 and 19-73.

EQUIPMENT

Basic Issue Items: See ORD 7 SNL J-738, Sec. 37.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

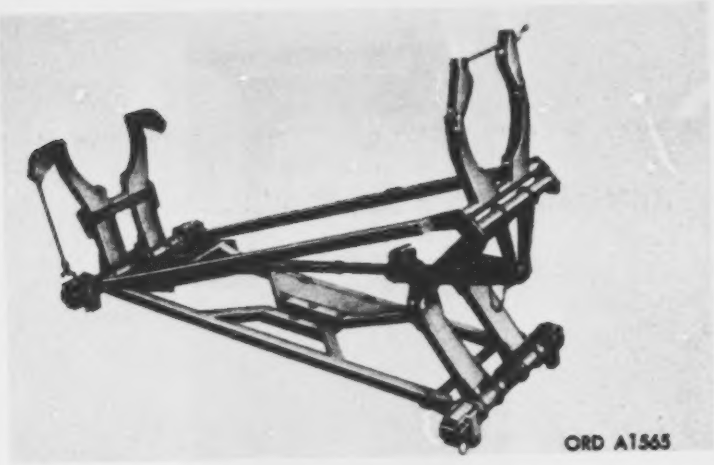
Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons ---

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons ---

Reference: TM 9-9502-3

CARRIAGE, MISSILE HANDLING: M28



ORD A1565

Model	*Major item Line item No.*	*Federal stock No.*
M28	4-05062-10	1450-734-5406

General

MISSILE HANDLING CARRIAGE M28 is stored in the storage compartment under the flat bed trailer. The carriage supports the missile during the defueling operation, and enables the missile to be elevated and lowered, and rolled about its longitudinal axis in the handling rings. The carriage is composed of speed handles, axle locks, brackets, elevation indicator, elevating gear, and clamps.

Differences among models

Data plate location

The identification plate appears on a crossbar located near the rear end of the handling carriage.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	385 lb
Length	7 ft, 11 in.
Width	3 ft, 3⅜ in.
Height (folded)	10⅞ in.
Height (elevated)	5 ft, 3 in.

PERFORMANCE

Elevation (max)	+15 deg
Depression (max)	—3 deg

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-16

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	8 ft, 6 in.
Width	3 ft, 7⅝ in.
Height	1 ft, 7⅛ in.
Volume	50 cu ft
Gross weight	625 lb
Ship tons	1.25

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SM 9-5-1450, 40, 50; TM 9-9502-4.

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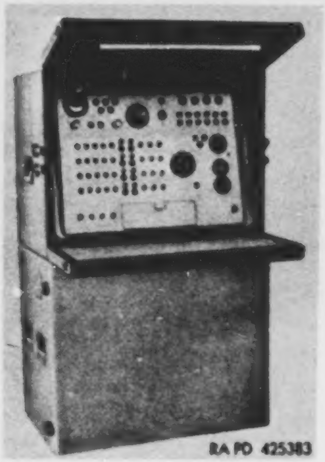
CONTROL INDICATOR: C-1488/MSE-2


RA PD 425383

Model	*Major item Line item No.*	*Federal stock No.*
C-1488/MSE-2	4-10830-10	1430-568-8173

General

CONTROL INDICATOR C-1488/MSE-2 is part of the section control equipment.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Weight	280 lb
Length	3 ft
Width	2 ft, 2 in.
Height	2 ft, 4 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	3 ft, 7⅛ in.
Width	2 ft, 7⅛ in.
Height	2 ft, 7⅛ in.
Volume	23.9 cu ft
Gross weight	388 lb
Ship tons	0.59

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SB 9-122, ORD 7 SNL Y-5, TM 9-5010-2-2, SM 9-5-1430, 40, 50.

CONTROL INDICATOR: C-1487/MSE-2

Model	*Line item No.*	*Federal stock No.*
C-1487/MSE-2		1440-698-4823

General

CONTROL INDICATOR: C-1487/MSE-2 is used to operate the launcher and to transfer control of the launcher to the section operating control indicator C-1488/MSE-2 mounted on the simulator group. It is used for testing the missiles while they are positioned on the launcher or on the loading rack. It also serves as one of the stations in the technical phone loop. As an indicator, it indicates the amount of current drawn from the 28-volt dc power supply while testing the missile. It indicates either the external dc voltage or the voltage of the battery located in the missile being tested.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Weight	45 lb
Length	1 ft, $3\frac{1}{8}$ in.
Height	1 ft, $2\frac{1}{8}$ in.
Width	$8\frac{1}{16}$ in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-5010-2-2, TM 9-5017-5.

DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA–7, AN/MSA–7A, AN/MSA–17, AND AN/MSA–17A

ORD A1566

Model	Major item Line item No.	Federal stock No.
AN/MSA–7	4–12472–10	1430–568–8174
AN/MSA–7A	4–12472–20	1430–568–8175
AN/MSA–17	4–12472–30	1430–611–1642
AN/MSA–17A	4–12472–35	1430–611–1643

General

DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA–7, AN/MSA–7A, AN/MSA–17, and AN/MSA–17A, consists of a director-computer group OA–865/MSA–7 and a TRAILER, VAN: director station M259;* AN/MSA–7A consists of director-computer group OA–865/MSA–7 and TRAILER, VAN: director station M259A1;* AN/MSA–17 consists of director-computer group OA–865/MSA–7 and TRAILER, VAN: director station M259C;* and AN/MSA–17A consists of director-computer group OA–865A/MSA–7 and TRAILER, VAN: director station M259A10.*

Differences among models

Data plate location

Classification

AN/MSA–7	Standard B (OTCM 36841)
AN/MSA–7A	Standard B
Other models	No type classification

CHARACTERISTICS

AN/MSA–7 and AN/MSA–7A:

Weight	12,650 lb
Length	21 ft, 4 in.
Width	8 ft
Height	10 ft, 9 in.

AN/MSA–17 and AN/MSA–17A:

Weight	
Length	
Width	
Height	

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4–2

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

AN/MSA–7 and AN/MSA–7A

Within Continental United States

Shipped

Length	21 ft, 7 in.
Width or diameter	8 ft
Height	10 ft, 6 in.
Volume	1,794 cu ft
Gross weight	12,650 lb
Ship tons	44.85

Outside Continental United States

Shipped

Length	
Width or diameter	
Height	
Volume	
Gross weight	
Ship tons	

AN/MSA–17 and AN/MSA–17A

Within Continental United States

Shipped

Length	20 ft, 5 in.
Width	7 ft, 10¾ in.
Height	10 ft, 8 in.
Volume	1,794 cu ft
Gross weight	12,650.0 lb
Ship tons	44.85

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y4–2, TM 9–5010–2–1, SM 9–5–1430, 40, 50.

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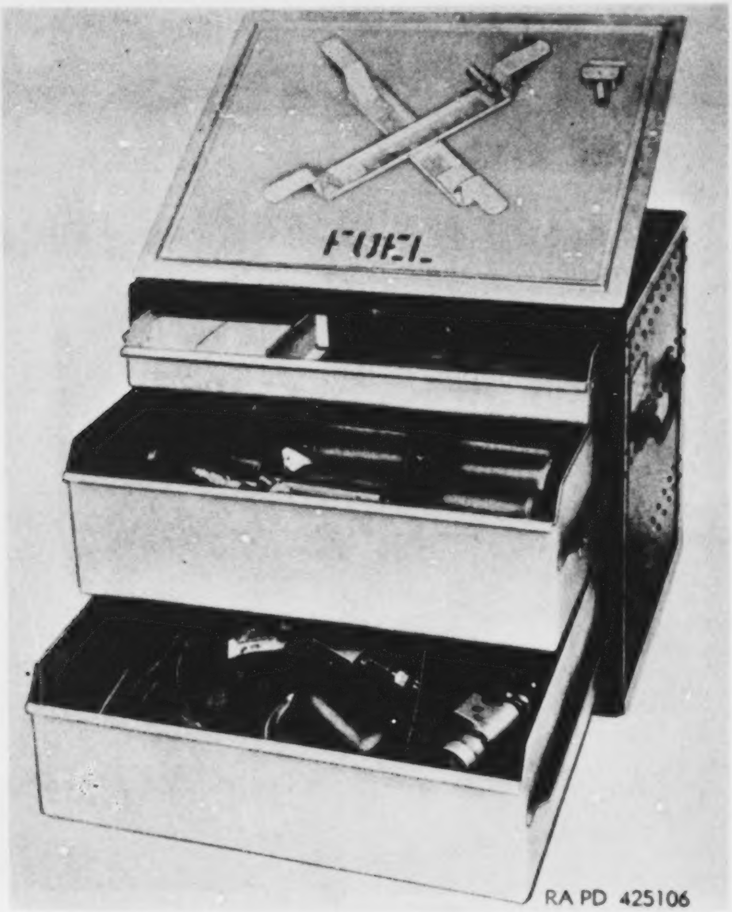
*For characteristics and data, see item in section 22.

DRAINING KIT, FUEL, GUIDED MISSILE: M54


RA PD 425106

Model	*Major item Line item No.*	*Federal stock No.*
M54	4-12681-10	1450-342-5308

General

DRAINING KIT, FUEL, GUIDED MISSILE: M54, is a three-drawer metal box, the door of which is labeled FUEL. The fuel draining kit stores the fuel draining and UDMH draining equipment. The fuel draining operation is accomplished in the service and joining area.

Differences among models

Data plate location

The identification plate for fuel draining kit M54 is located in the upper left corner on one of the carrying sides.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Weight	68.7 lb
Height (overall)	1 ft, 6⅞ in.
Width	2 ft, $\frac{7}{16}$ in.
Depth	1 ft, 6⅞ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

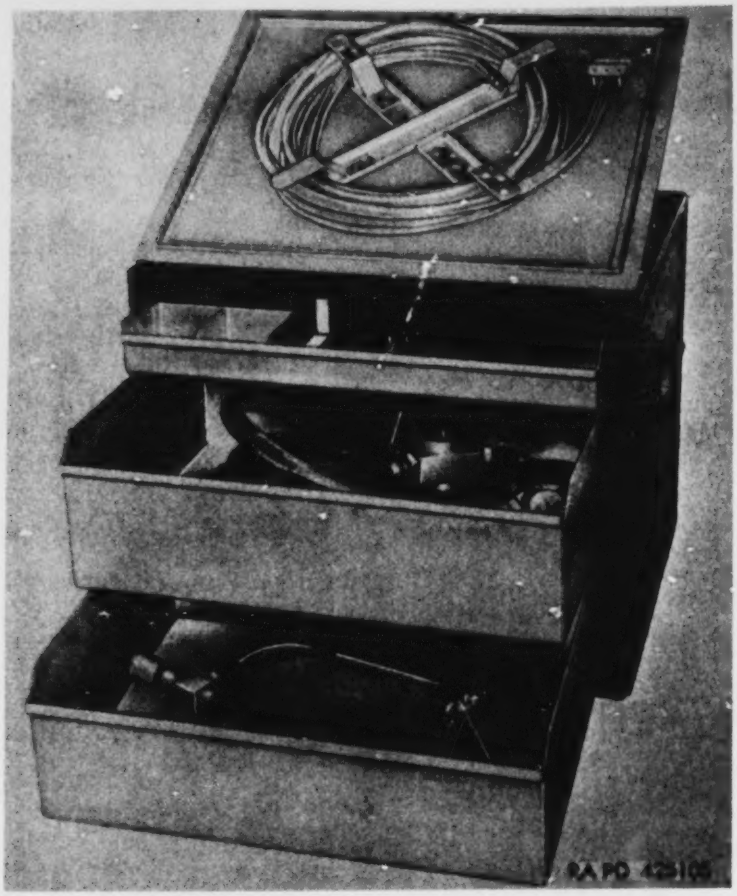
Shipped	
Length	2 ft, 3⅞ in.
Width	1 ft, 10½ in.
Height	2 ft, ⅝ in.
Volume	8.5 cu ft
Gross weight	114 lb
Ship tons	0.2125

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-4, SM 9-5-1430, 40, 50.

DRAINING KIT, OXIDIZER, GUIDED MISSILE: M53



Model	*Line item No.*	*Federal stock No.*
M53	4-12683-10	1450-342-5122

General

DRAINING KIT, OXIDIZER, GUIDED MISSILE: M53, is a three-drawer metal box, the door of which is labeled OXIDIZER. The oxidizer draining kit contains the oxidizer draining equipment.

Differences among models

Data plate location

The identification plate for oxidizer draining kit M53 is located in the upper-left corner on one of the carrying sides.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Weight	71.6 lb
Height (overall)	1 ft, 8¾ in.
Width	2 ft, ⅞ in.
Depth	1 ft, 6⅞ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

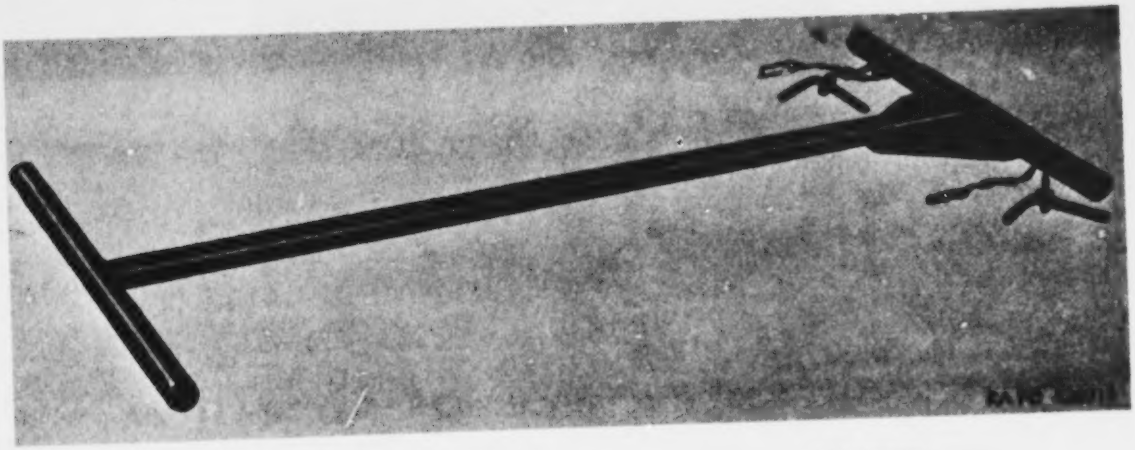
Shipped	
Length	
Width	
Height	
Volume	10.00 cu ft
Gross weight	125 lb
Ship tons	0.25

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-4.

DRAWBAR, TRUCK, BRACKET, HAND:



Model	*Secondary item* *Line item No.*	*Federal stock No.*
		1450-800-3128

General

DRAWBAR, TRUCK, BRACKET, HAND: can be attached to either the inert guided missile truck M256* or the guided missile rocket motor truck M254.* It is used for moving the trucks and is constructed of steel tubing. The attaching end of the drawbar is locked in place with two ball-lock pins which are secured with chains near each end of the bar when it is mounted on the towing lugs on the trucks.

Differences among models

Data plate location

A metal identification plate is attached to the triangular joining member of the hand bracket truck drawbar.

Classification:

CHARACTERISTICS

Weight	14½ lb
Length (front to rear)	4 ft, 10 in.
Width	2 ft
Height	1¾ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL J-788, Sec. 34.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	4 ft, 10⅜ in.
Width	2 ft, ¼ in.
Height	1⅞ in.
Volume	1.58 cu ft
Gross weight	14.75 lb
Ship tons	0.038

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: ORD 7 SNL J-788, Sec. 34.

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* For characteristics and data, see item on page 19-71.

ELECTRICAL EQUIPMENT INSTALLATION, LAUNCHER-LOADER: (ORD NO. 8001527)

(Data to be published at a later date.)

Model	*Line item No.*	*Federal stock No.*
(ORD NO. 8001527)		

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length --

Width --

Height --

Volume --

Gross weight --

Ship tons --

Outside Continental United States

Shipped

Length --

Width --

Height --

Volume --

Gross weight --

Ship tons --

Reference: SNL Y-5.

ELECTRONIC SHOP, TRAILER MOUNTED: M304 AND M304A1, W/E

ORD A1560

Model	*Line item No.*	*Federal stock No.*
M304	4-13481-10	1430-568-8176
M304A1	4-13481-20	1430-568-8177
	4-13481-25	1430-474-5770

General

ELECTRONIC SHOP, TRAILER MOUNTED: M304 and M304A1, w/e, provides workspace and facilities for organizational maintenance activities and storage space for all authorized tools and repair parts. The electronic shop M304 consists of electronic shop group M16 and TRAILER VAN: electronic shop, 2½-ton, 4-wheel, M359* (front trailer dolly M429N and rear trailer dolly M430N). The electronic shop M304A1 consists of electronic shop group M16 and TRAILER VAN: electronic shop, 2½-ton, 4-wheel, M359A1 (front trailer dolly M429A1F and rear trailer dolly M430A1F).

Differences among models

FSN 1430-474-5770 is the same as the M304A1 except it is less the M16 Electronic Shop Group Equipment.

Data plate location

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Weight	11,950 lb
Length	19 ft, 8 in.
Width	8 ft
Height	10 ft, 9 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4-6.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M304

Within Continental United States

Shipped	
Length	19 ft, 8 in.
Width	8 ft
Height	10 ft, 9 in.
Volume	1,688 cu ft
Gross weight	13,195.0 lb
Ship tons	42.2

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

M304A1

Within Continental United States

Shipped	
Length	216 in.
Width	94¾ in.
Height	126 in.
Volume	1,622 cu ft
Gross weight	11,989.0 lb
Ship tons	40.55

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y4-6, TM 9-8010-2-1, SM 9-5-1430, 40, 50.

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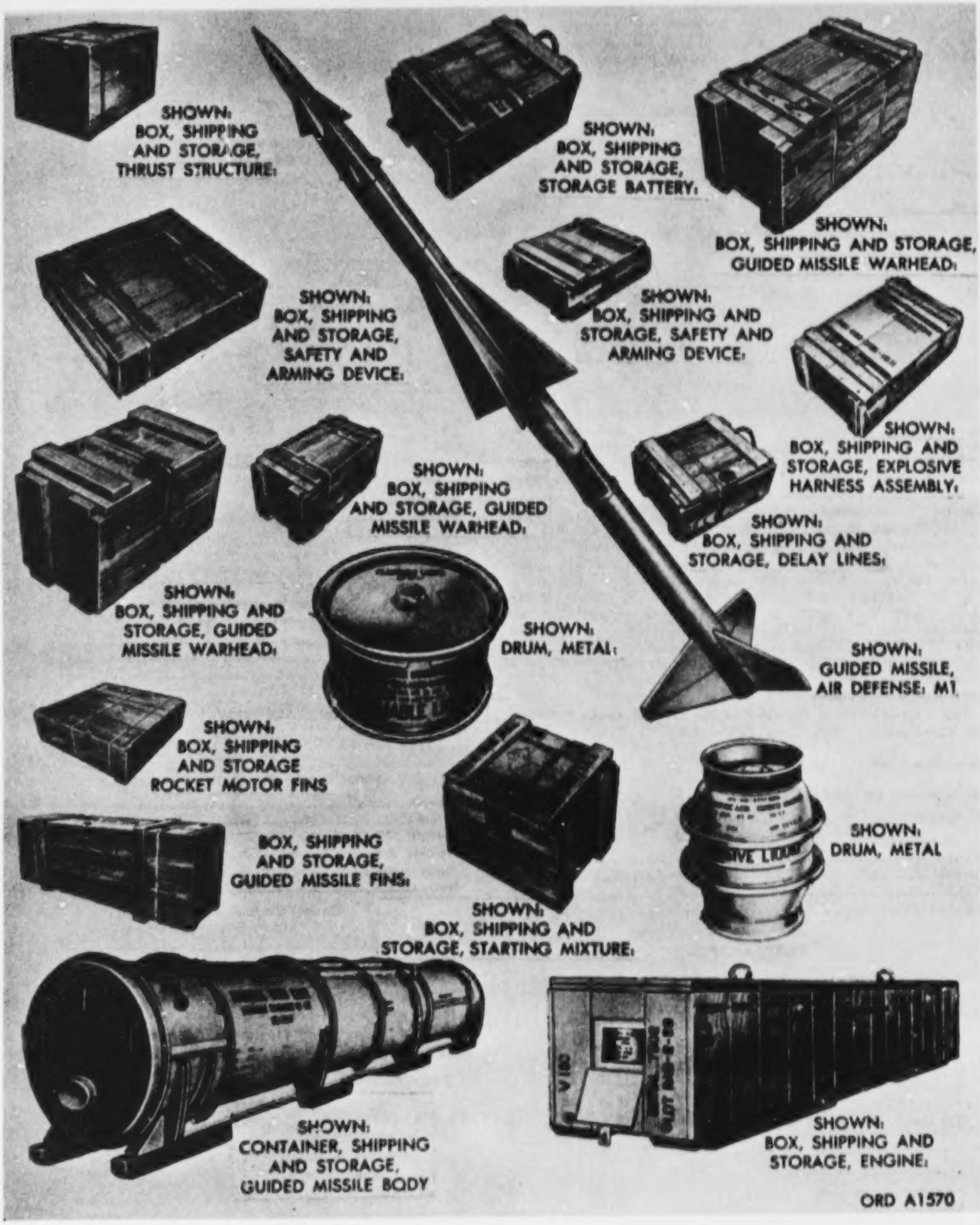
*For characteristics and data, see item in section 22.

GUIDED MISSILE, AIR DEFENSE: M1


SHOWN:
BOX, SHIPPING AND STORAGE, THRUST STRUCTURE:
SHOWN:
BOX, SHIPPING AND STORAGE, STORAGE BATTERY:
SHOWN:
BOX, SHIPPING AND STORAGE, GUIDED MISSILE WARHEAD:
SHOWN:
BOX, SHIPPING AND STORAGE, SAFETY AND ARMING DEVICE:
SHOWN:
BOX, SHIPPING AND STORAGE, SAFETY AND ARMING DEVICE:
SHOWN:
BOX, SHIPPING AND STORAGE, EXPLOSIVE HARNESS ASSEMBLY:
SHOWN:
BOX, SHIPPING AND STORAGE, GUIDED MISSILE WARHEAD:
SHOWN:
BOX, SHIPPING AND STORAGE, DELAY LINES:
SHOWN:
BOX, SHIPPING AND STORAGE, GUIDED MISSILE WARHEAD:
SHOWN:
DRUM, METAL:
SHOWN:
GUIDED MISSILE, AIR DEFENSE: M1
SHOWN:
BOX, SHIPPING AND STORAGE ROCKET MOTOR FINS
SHOWN:
DRUM, METAL
BOX, SHIPPING AND STORAGE, GUIDED MISSILE FINS:
SHOWN:
BOX, SHIPPING AND STORAGE, STARTING MIXTURE:
SHOWN:
CONTAINER, SHIPPING AND STORAGE, GUIDED MISSILE BODY
SHOWN:
BOX, SHIPPING AND STORAGE, ENGINE:

ORD A1570

Model	*Line item No.*	*Federal stock No.*
M1		

General

GUIDED MISSILE AIR DEFENSE: M1 is a 2-stage, surface-to-air missile which consists of antenna, storage battery, missile body M2 or XM2, delay lines, explosive harness assembly, control and stabilizer fin, rocket motor fin, nitric acid, propellant mixture, rocket motor, safety and arming device, starting mixure (UDMH), and guided missile warheads M2, M3, and M4. The missile is initially accelerated by a solid propellant jato unit which separates from the missile after burnout. A pressure-fed liquid propellant sustainer motor is activated upon separation of the jato unit and provides the missile with sustaining thrust. An electronic guidance section within the missile body provides the beacon signal necessary for ground-based radar tracking of the missile. The guidance section also receives, demodulates, and amplifies incoming signals. These amplified signals are used to activate hydraulically operated ailerons and fins which establish and maintain proper altitude and path control of the missile. The destructive power of the missile is provided by simultaneous detonation of three high-explosive fragmentation-type warheads within the missile body.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Missile:	
Weight	2,259 (gross) 450.0 lb (empty)
Length	34 ft, 1 in.
Antennas:	
Chord	10⅝ in.
Height	3 in.
Control fins (4):	
Chord	20 3/16 in.
Circular span	24⅝ in.
Diameter (max), including tunnels	1 ft, 2⅝ in.
Stabilizer fins (4):	
Chord (max)	6 ft
Circular span	4 ft, 2 in.
Jato Unit:	
Fins (3):	
Chord	3 ft, 1⅛ in.
Circular span	7 ft, 2⅝ in.
Weight (each)	21.5 lb
Length, including thrust structure	13 ft, 2 in.
Length, without thrust structure	11 ft, 4 in.
Diameter (max)	1 ft, 4 3/16 in.
Weight:	
Loaded	1,208.00 lb
Empty	458.00 lb
Safety and Arming Device:	
Weight	1½ lb
Height	3½ in.
Diameter	2½ in.
Quantity per complete round	2

Explosive Harness Assembly:

Lead	*Length*
No. 1	8⅝ in.
No. 2	6 ft, 10 in.
No. 3	2 ft, 3⅝ in.
No. 4	13 ft, 2 3/16 in.
No. 5	1 ft, 3 3/16 in.

Warhead M2:	
Weight	12 lb
Height	6⅔ in.
Diameter	5⅓ in.
Warhead M3:	
Weight	176.75 lb
Length (overall)	1 ft, 11 in.
Explosive filler	92 lb
Diameter (max)	11 11/16 in.
Warhead M4:	
Weight	121.25 lb
Length (overall)	1 ft, 9½ in.
Explosive filler	59 lb
Diameter (max)	11¼ in.
Electric Jato Igniter: M24	
Weight	9 lb
Height	3½ in.
Diameter	5½ in.
Propellant grain:	
Weight	750 lb
Length (multiperforated)	8 ft, 6 in.
Diameter	1 ft, 4 in.
Storage battery:	
Weight	11.5 lb
Length	6¼ in.
Width	4 in.
No. of cells	24
Voltage of each cell	1 3/10 v
Delay lines:	
GS 15666 series:	
Weight (disk)	1 lb
Diameter (metal disks)	8 in.
Thickness	⅝ in.
GS 17194 series:	
Weight (disk)	1.2 lb
Diameter (fiberglass disks)	6 in.
Thickness	2 3/16 in.
Jato thrust structure M2:	
Weight	31.5 lb
Length	2 ft, ½ in.
Diameter	1 ft, 7 in.
Starting mixture (UDMH):	
Weight (liquid)	6.64 lb/gal. at 60° F.
Boiling point	146° F.
Freezing point	—72° F.
Specific gravity	0.795 at 60° F.
Nitric acid:	
Freezing point	—68° F.
Boiling point	183° F.
Melting point	—60° F.
Specific gravity	1.563 ± 0.007 at 68° F.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See SNL Y-2.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Antenna: GS 19745-L1, L2, L3, L4, and L5:

Shipped 18 antennas per wooden box

Length	3 ft, 3⅝ in.
Width	9⅝ in.
Height	1 ft, 5¾ in.
Volume	3.9 cu ft
Gross weight	81 lb
Ship tons	0.0975

Guided missile body M2 and XM2:

Shipped 1 missile body per metal container

Length	22 ft, 1½ in.
Width	3 ft, 2 3/16 in.
Height	3 ft, 5 in.
Volume	240.4 cu ft
Gross weight	2,495 lb
Ship tons	6.01

STORAGE AND SHIPMENT DATA—Continued

Within Continental United States—Continued

Control surfaces kit:

Shipped 1 kit per plywood box

Length	6 ft, 3½ in.
Width	1 ft, 9 in.
Height	2 ft, 2 in.
Volume	23.9 cu ft
Gross weight	216 lb
Ship tons	0.5975

Delay line: GS 15666

Shipped 10 lines per wooden box

Length	1 ft, 7⅝ in.
Width	10 1/16 in.
Height	8 15/16 in.
Volume	1 cu ft
Gross weight	78 lb
Ship tons	0.025

Delay line: GS 17194

Shipped 10 lines per wooden box

Length	1 ft, 6 in.
Width	1 ft, 2 1/16 in.
Height	8 in.
Volume	1.2 cu ft
Gross weight	41 lb
Ship tons	0.03

Safety and arming device M27:

Shipped 25 devices per wooden box

Length	2 ft, 2⅝ in.
Width	2 ft, ¾ in.
Height	9 in.
Volume	3.4 cu ft
Gross weight	81 lb
Ship tons	0.085

Safety and arming device M30A1:

Shipped 20 devices per wooden box

Length	1 ft, 3 1/16 in.
Width	9 1/16 in.
Height	7 13/16 in.
Volume	0.64 cu ft
Gross weight	48.0 lb
Ship tons	0.016

Explosive harness assembly M24:

Shipped 10 assemblies per wooden box

Length	2 ft, 2⅝ in.
Width	1 ft, 3½ in.
Height	9 13/16 in.
Volume	2.34 cu ft
Gross weight	38.0 lb
Ship tons	0.0585

Warhead M2:

Shipped 1 warhead per wooden box

Length	1 ft, 2¾ in.
Width	8 11/16 in.
Height	8 15/16 in.
Volume	0.67 cu ft
Gross weight	25.0 lb
Ship tons	0.01675

Warhead M3:

Shipped 1 warhead per wooden box

Length	2 ft, 4 1/16 in.
Width	1 ft, 1 1/16 in.
Height	1 ft, 4 13/16 in.
Volume	3.6 cu ft
Gross weight	212 lb
Ship tons	0.09

Warhead M4:

Shipped 1 warhead per wooden box

Length	2 ft, 2⅝ in.
Width	1 ft, ⅝ in.
Height	1 ft, 4 3/16 in.
Volume	3.16 cu ft
Gross weight	153 lb
Ship tons	0.079

Jato Unit M6:

Shipped 1 Jato unit per wooden box

Length	14 ft, 9 in.
Width	2 ft, 1¼ in.
Height	2 ft, 7½ in.
Volume	81.48 cu ft
Gross weight	1,883 lb
Ship tons	2.37

References: SNL Y-2, TM 9-1970-2, SM 9-5-1420, SM 9-5-1336.

HYDRAULIC EQUIFMENT INSTALLATION, LAUNCHER-LOADER: (ORD NO. 8166528)

(Data to be published at a later date.)

Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
- **Length** ....
- **Width** ....
- **Height** ....
- **Volume** ....
- **Gross weight** ....
- **Ship tons** ....

Outside Continental United States

Shipped
- **Length** ....
- **Width** ....
- **Height** ....
- **Volume** ....
- **Gross weight** ....
- **Ship tons** ....

Reference: SNL Y-2.

INSULATION BLANKET, THERMAL: (ORD NO. 8166016)

(Data to be published at a later date.)

Model	Secondary item Line item No.	Federal stock No.
		1420–605–0034

General

THE THERMAL INSULATION BLANKET: (ORD NO. 8166016) consists of discount strap lock pin, separation assembly, main disconnect strap, blanket thermal sections A, B, C, D, D–2, and E, guided missile thermal blanket, and electrical power cable assembly. One thermal insulation blanket is required for each NIKE-AJAX missile booster combination. Heating blankets must be applied where the temperature may be expected to fall below the low firing temperature limit specification.

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight ------------------------------------
Ship tons ---------------------------------------

References: SNL Y–5, SB 9–160.

KIT WINTERIZATION, GUIDED MISSILE LAUNCHER:

(Data to be published at a later date.)

Model	*Secondary item* *Line item No.*	*Federal stock No.*
		1440-098-8565

General

KIT, WINTERIZATION, GUIDED MISSILE LAUNCHER: consists of electrical bushing, special purpose cable assembly, special purpose electrical cable assembly, cable grip, interconnecting boxes, conduit electrical locknut, modification installation manual, strap assembly, and wiring harness. The winterization kit is used on NIKE-AJAX launcher loaders M26, M26A1, M26A2, and M26A3. At above ground sites, one kit per launcher-loader is required. This application will support four missile-booster-combinations, one on the launcher and one at each of the three test stations. At underground sites, one kit is required for each elevator-mounted launcher, and one for the satellite launchers.

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

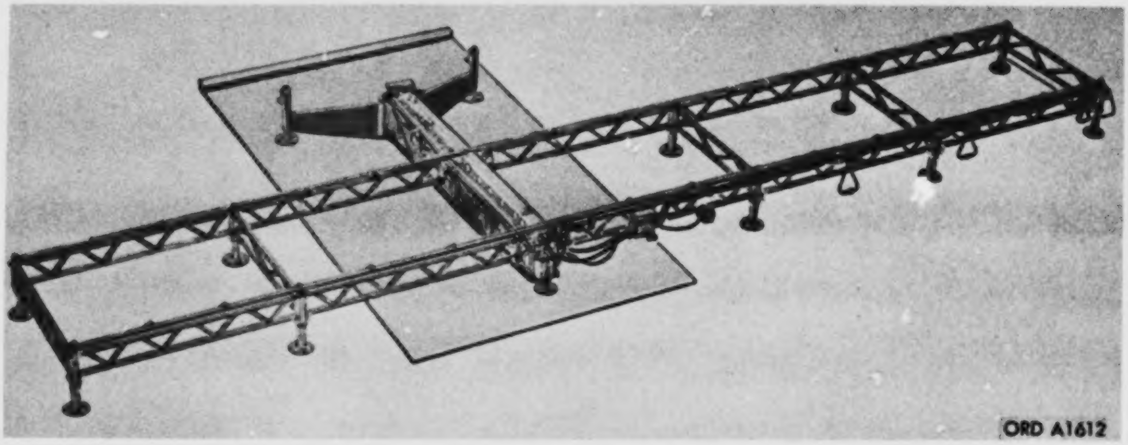
Shipped
- Length --
- Width --
- Height --
- Volume --
- Gross weight --
- Ship tons --

Outside Continental United States

Shipped
- Length --
- Width --
- Height --
- Volume --
- Gross weight --
- Ship tons --

References: SNL Y-5, SB 9-100.

LAUNCHER-LOADER, GUIDED MISSILE: M26, M26A1, M26A2, AND M26A3, W/E



Model	*Line item No.*	*Federal stock No.*
M26	4-20767-10	1440-568-8180
M26A1	4-20767-20	1440-568-8181
M26A2	4-20767-21	1440-509-2979
M26A3	4-20767-40	1440-521-9843

General

Differences among models

The various current models of the launcher-loader are generated from two basic launcher-loaders; M26 which includes launchers 1001 through 1960; and M26A1, which includes launchers 1961 and subsequent.

Launcher M22A2, with loading and storage racks and hydraulic and electrical accessories, forms launcher-loader M26A2 when used on surface installations.

Launcher M22A3, with loading and storage racks and hydraulic and electrical accessories, forms launcher-loader M26A3 when used on surface installations.

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight (complete)	6,049 lb
Weight (emplaced)	2,745 lb
Length (emplaced)	22 ft
Width (emplaced)	13 ft, 8 in.
Height (emplaced, adjustable)	2 ft, 10 in. to 4 ft, 4 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

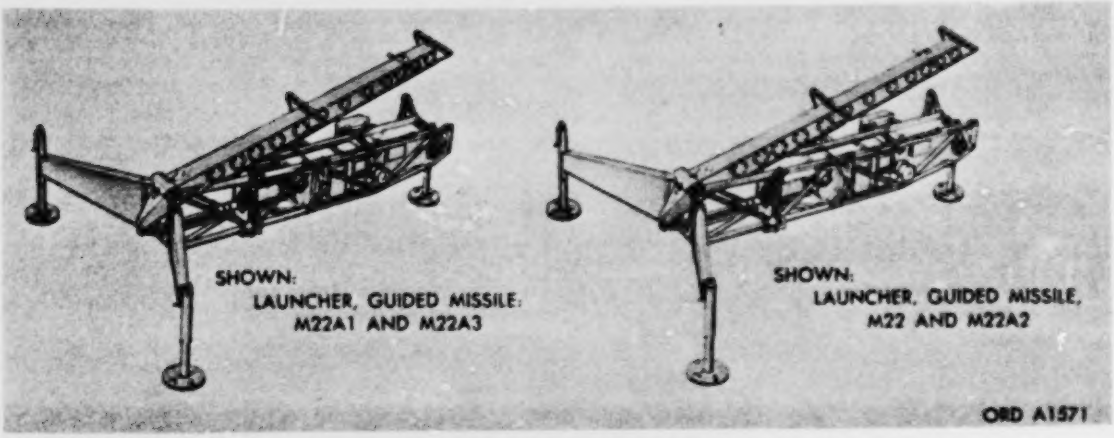
Shipped	
Length	18 ft
Width or Diameter	4 ft, 6¾ in.
Height	4 ft, 4⅝ in.
Volume	362 cu ft
Gross weight	4,600 lb
Ship tons	9.05

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-5010-2-2, TM 9-5017-5, SM 9-5-1430, 40, 50.

LAUNCHER, GUIDED MISSILE: M22, M22A1, M22A2, AND M22A3



Model	*Major item Line item No.*	*Federal stock No.*
M22	4-20765-01	1440-609-4072
M22A1	4-20765-02	1440-609-4073
M22A2	4-20765-03	1440-609-4074
M22A3	4-20765-04	1440-609-4075

General

Differences among models

Current models of the launchers are generated from two basic launchers M22 includes launchers 1001 through 1960; and M22A1 includes launchers 1961 and subsequent.

M22A2 has an oil cooler located in the launcher base structure and the running gear for transporting the launcher is equipped with electrically operated brakes.

M22A3 does not incorporate an air cooler and the running gear for transporting the launcher is equipped with air-hydraulic brakes.

Data plate location

Classification: Standard B (OTCM 37272).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	20 ft, 3 in.
Width	13 ft, 8 in.
Height	2 ft, 11 in.
Volume	807.19 cu ft
Gross weight	3,900 lb
Ship tons	20.17

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, TM 9-5017-5, SM 9-5-1430, 40, 50

LAUNCHER, MONORAIL, GUIDED MISSILE: M28A2 AND M28A3

Model	*Major item* *Line item No.*	*Federal stock No.*
M28A2	4-20767-56	1440-678-8021
M28A3	4-20767-60	1440-678-8018

General

Differences among models

Launcher M22A2 with the application of the following field change FC-1193 which provides for modification of equipment for underground installation becomes launcher M28A2 when mounted on the elevator platform in the underground installation.

Launcher M22A3 with the application of the above change, FC-1193, becomes launcher M28A3 when mounted on the elevator platform in the underground installation.

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	20 ft, 3 in.
Width	13 ft, 8 in.
Height	2 ft, 11 in.
Volume	807.19 cu ft
Gross weight	3,900 lb
Ship tons	20.17

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, TM 9-5017-5, SM 9-5-1430, 40, 50.

LAUNCHER, MONORAIL, GUIDED MISSILE: M29A2 AND M29A3

Model	*Major item Line item No.*	*Federal stock No.*
M29A2	4-20767-54	1440-678-8020
M29A3	4-20767-52	1440-678-8019

General

Differences among models

Launcher M22A2 with the application of field change FC-1193 which provides for modification of equipment for underground installation becomes launcher M29A2 when utilized as launcher No. 2 or 3 in the underground installation.

Launcher M22A3 with the application of the above field change FC-1193 becomes launcher M29A3 when utilized as launcher No. 2 or 3 in the underground installation.

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M29A2 and M29A3

Within Continental United States

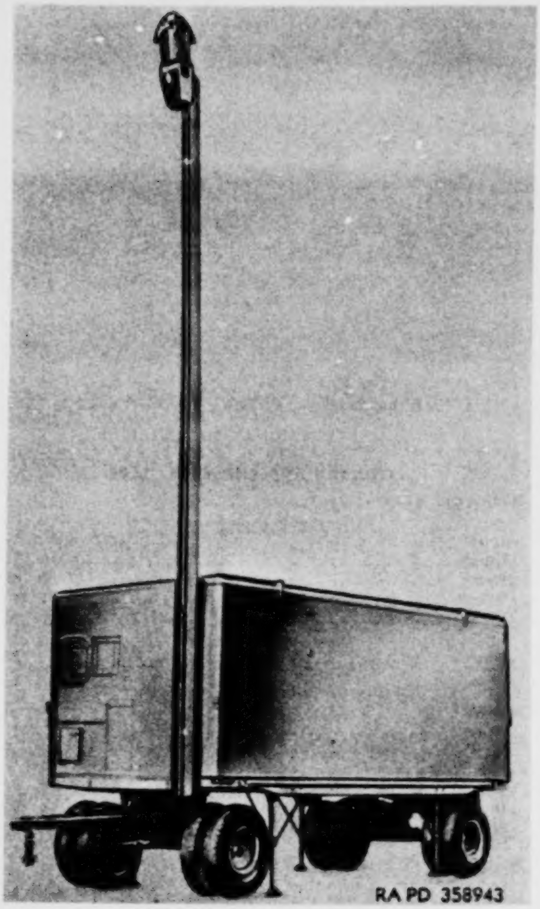
Shipped	
Length	20 ft, 3 in.
Width	13 ft, 8 in.
Height	2 ft, 11 in.
Volume	807.19 cu ft
Gross weight	3,900 lb
Ship tons	20.17

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, TM 9-5017-5, SM 9-5-1430, 40, 50.

LAUNCHING CONTROL GROUP, TRAILER MOUNTED: OA–867/MSE–2 AND OA–867A/MSE–2, W/E



Model	Major item Line item No.	Federal stock No.
OA–867/MSE–2	4–21897–10	1440–568–8178
OA–867A/MSE–2	4–21897–20	1440–568–8179

General

LAUNCHING CONTROL GROUP, TRAILER MOUNTED: OA–867/MSE–2 consists of launching control group OA–868/MSE–2 and TRAILER VAN: launching control M262* (front trailer dolly M429K and rear trailer dolly M430K). LAUNCHING CONTROL GROUP, TRAILER MOUNTED: OA–867A/MSE–2 consists of launching control group OA–868/MSE–2 and TRAILER VAN: launching control M262A1* (front trailer dolly M429A1K and rear trailer dolly M420A1K). The launching control group is the central control station in the launching area. It contains the necessary controls, indicators, and communication equipment for control of the launching sections, and supplies tactical launching area information to the guidance and control area.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Launching Control Group 867/MSE–2

	Outside	Inside
Length	18 ft, 9 in.	18 ft, 4 in.
Width	7 ft, 10¾ in.	7 ft, 6 in.
Height	10 ft, 6 in.	6 ft, 3 in.
Wheel Base		16 ft, 5 in.
Outer wheel tread		6 ft, 9 in.
Inner wheel tread		5 ft
Ground clearance		1 ft, 2¾ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y6–1

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Launching Control Group: OA–867/MSE–2 and OA–867A/MSE–2

Within Continental United States

Shipped	
Length	18 ft, 9 in.
Width	7 ft, 10¾ in.
Height	10 ft, 6 in.
Volume	1,622 cu ft
Gross weight	12,000 lb
Ship tons	40.55

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y6–1, TM 9–5001–12, TM 9–5001–28, TM 9–5010–2–2, SM 9–5–1430, 40, 50.

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* For characteristics and data, see item in section 22.

MODIFICATION KIT, GUIDED MISSILE LAUNCHING SECTION:

(Data to be published at a later date.)

Model	*Secondary item Line item No.*	*Federal stock No.*
	9-43438 (Temp.)	1440-715-3728

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

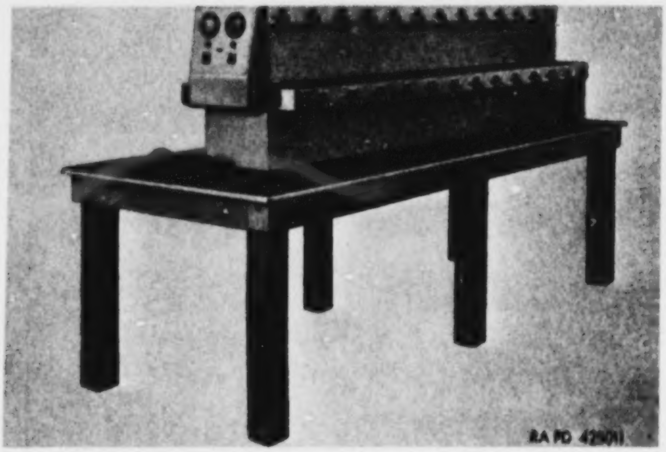
Shipped	
Length	
Width	
Height	300 cu ft
Volume	4,200 lb
Gross weight	7.5
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, SM 9-5-1430, 40, 50.

RACK, BATTERY: MT-1498/G



Model	*Secondary item* *Line item No.*	*Federal stock No.*
MT-1498/G	4-3365-10	4935-568-8241

General

RACK, BATTERY: MT-1498/G is designed for use in the assembly and service area. It consists of a table-type structure, a battery-support superstructure, a main control panel, 52 individual battery control panels, and the necessary circuit breakers, voltmeters, ammeters, and switches to operate the rack. The rack receives power from an external 120-volt, 60 cps, single-phase, ac source. Two battery chargers, PP-775/U, are used with the rack to provide charging voltages but are not components of the battery rack.

Differences among models

Data plate location

An identification appears on the right end of the battery rack table-type structure.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Battery charging rack:	
Weight (net)	384 lb
Length	9 ft
Width	3 ft, 4 in.
Height	2 ft, 5 in.
Capacity	1 to 52 batteries
Input-power source	120-volt, 60 cps, single-phase, ac
Table-type structure:	
Length	9 ft
Width	3 ft, 4 in.
Height	2 ft, 8½ in.
Battery support superstructure:	
Length	7 ft, 8¾ in.
Width	1 ft, 11 in.
Main control panel:	
Width	1 ft
Height	1 ft, 3 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-9.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

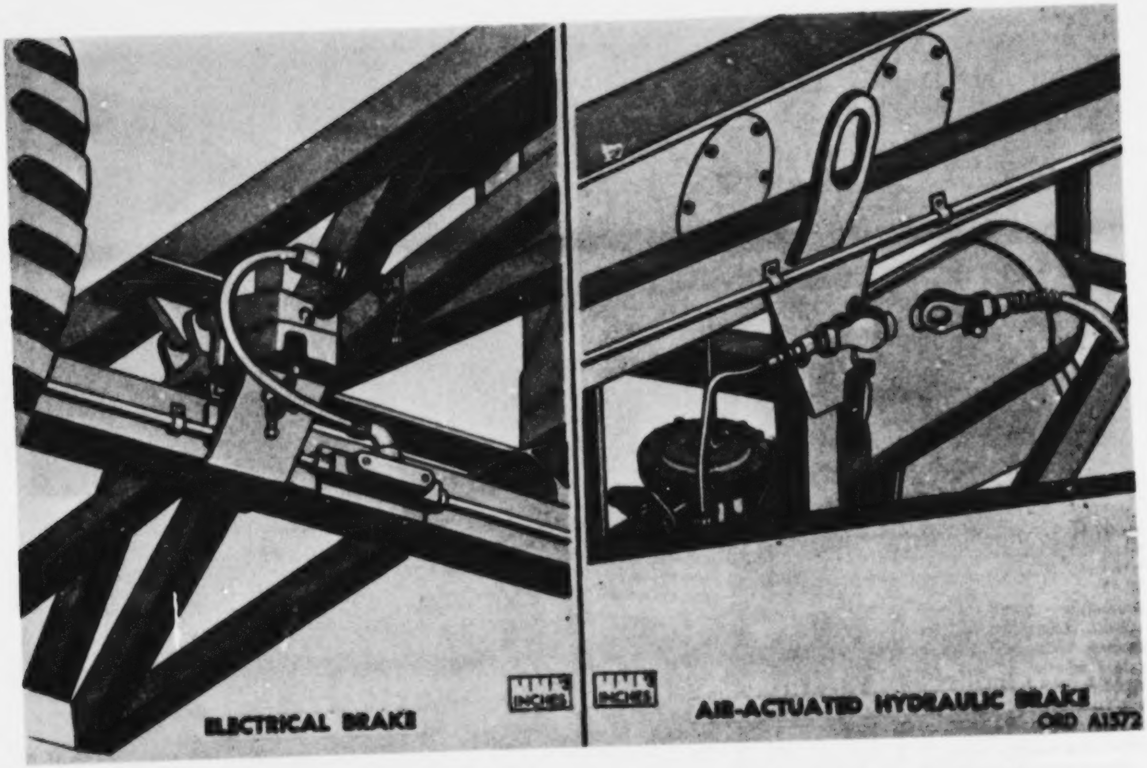
Shipped	
Length	9 ft, 4½ in.
Width	3 ft, 8¼ in.
Height	3 ft, 1 in.
Volume	106 cu ft
Gross weight	700 lb
Ship tons	2.65

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-5, SM 9-5-4935.

RUNNING GEAR, LAUNCHER



Model	*Line item No.*	*Federal stock No.*
	4-36720-01	1440-560-5518
	4-36720-02	1440-560-5519

General

RUNNING GEAR, LAUNCHER is composed of electric brakes or air-hydraulic brakes.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	698 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1440-560-5518 and 1440-560-5519

Within Continental United States

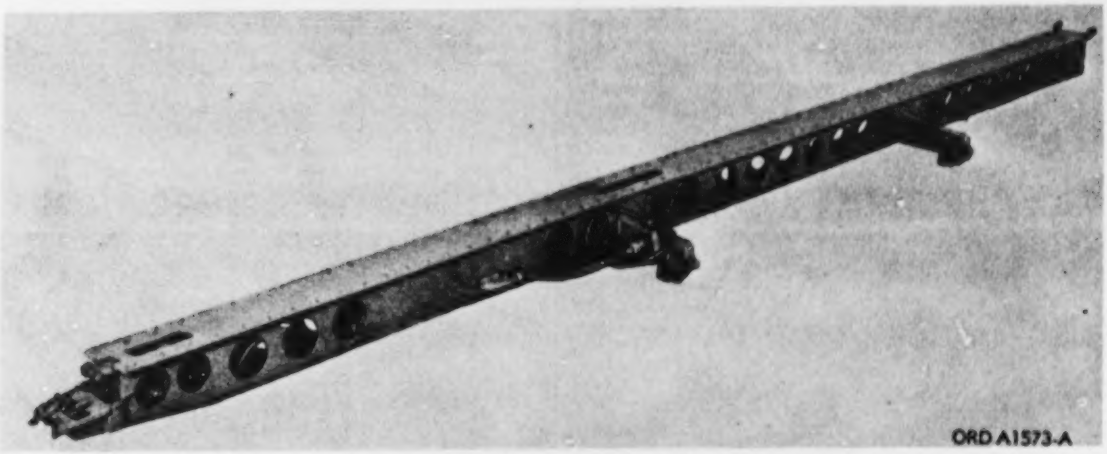
Shipped	*Box*	*Crate*
Length	3 ft, 11¼ in.	7 ft, 8¼ in.
Width	3 ft, 6 in.	2 ft, 3¼ in.
Height	1 ft, 1⅝ in.	1 ft, 11⅝ in.
Volume	15 cu ft	34.4 cu ft
Gross weight	810 lb	850 lb
Ship tons	0.375	0.86

Outside Continental United States

Shipped	*Box*	*Crate*
Length		
Width		
Height		
Volume		
Gross weight		
Ship tons		

References: SNL Y-5, TM 9-5010-2-2, SM 9-5-1430, 40, 50.

RAIL, LAUNCHING AND HANDLING: M1, M1A1, AND M1A2, W/E



Model	*Major item Line item No.*	*Federal stock No.*
M1	4-33652-10	1450-521-9847
M1A1	4-33652-15	1450-521-9848
M1A2	4-33652-20	1450-521-9846

General

RAIL, LAUNCHING AND HANDLING: M1, M1A1, and M1A2, provides mechanical guidance for the initial upward movement of guided missile M1 after firing. The launching and handling rail M1A2 is the supporting and handling unit for the joined missile body and JATO. Hydraulic and electrical systems are provided in the rail for testing operations.

Differences among models

Replacement of existing screw-type hydraulic disconnect fittings on the flexible hydraulic lines with one male and one female snap-type fitting, and modification of the electric plug and dummy receptacle for quick attachment changed the model number of the rail from M1 to M1A1.

The installation of a more durable bearing and axle bolt in the outrigger wheel assemblies to withstand shock loads changed the model number of the rail from M1A1 to M1A2 and the ordnance part number from 8166500 to 8530775.

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Launching and Handling rail M1A2:

Height (overall)	1 ft
Length	22 ft, 4 in.
Width	3 ft, 4 in.
Weight	732 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-13.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M1

Within Continental United States

Shipped	
Length	22 ft, 10⅝ in.
Width	3 ft, 9½ in.
Height	4 ft, 7⅞ in.
Volume	404 cu ft
Gross weight	5,160 lb
Ship tons	10.1

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

M1A1

Within Continental United States

Shipped	
Length	22 ft, 11 in.
Width	3 ft, 9 in.
Height	1 ft, 9½ in.
Volume	156 cu ft
Gross weight	1,250 lb
Ship tons	3.9

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

M1A2

Within Continental United States

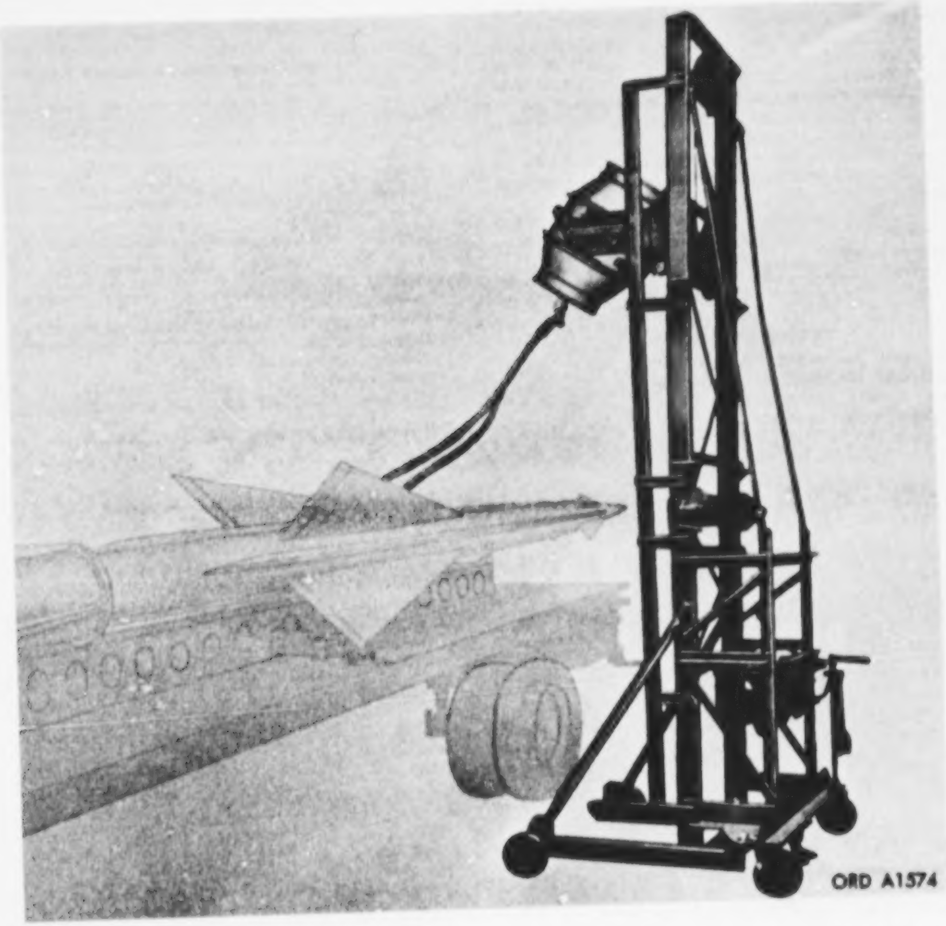
Shipped	
Length	23 ft
Width	5 ft, 3 in.
Height	4 ft, 7 in.
Volume	221 cu ft
Gross weight	2,112 lb
Ship tons	5.525

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-9502-3, SM 9-5-1430, 40, 50.

SERVICER, ACID, GUIDED MISSILE: M2, W/E



Model	*Major item Line item No.*	*Federal stock No.*
M2	4-39086-10	1450-868-8156

General

SERVICER, ACID, GUIDED MISSILE: M2, is utilised during the fuel filling of the missile. The acid servicer is composed of oxidiser lifter 8166700 or 8019825, oxidising drum, and oxidiser aspirator bottle. The oxidiser lifter incorporates the design into which is installed a drum of oxidiser. By elevating the harness of the lifter, gravity flow can be utilised for oxidiser filling of the missile. A safety device prevents the harness and oxidiser drum from falling if the cable breaks or if the winch fails. The oxidiser aspiration kit is used in removing by aspiration any excess oxidiser in the oxidiser tank of the missile body after filling. The oxidiser operations are performed in the joining and service area with the missile on the missile flat bed trailer.

Oxidiser lifter ORD NO. 8166700 is equipped with two stationary wheels at the front and two wheels of a handle assembly at the rear by which direction and movement at the lifter can be controlled. This oxidiser lifter incorporates two hinges and a safety device.

Oxidiser lifter ORD NO. 8019825 is equipped with two stationary wheels at the front and two wheels which swivel at the rear. The right rear wheel of this lifter is mounted in the bottom of a steerer assembly which permits control of lifter movement in any direction. This oxidizer lifter incorporates two self-locking hinges and a safety device to prevent the fuel drum platform from falling during the servicing of the missile.

Differences among models

Data plate location

The oxidiser servicer M2 nameplate is installed at the left of the winch lifter 8166700 and on the left side of the base frame on oxidiser lifter 8019825. The part number 8001950 shown on oxidiser servicer M2 nameplate is the number for the complete oxidiser filling equipment.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Oxidiser lifter ORD NO. 8019825:

Weight	910 lb
Height, overall	18 ft, 11 in.
Height at hinges	5 ft, 9 in.
Height of oxidiser drum harness or cradle above ground level:	
High	11 ft, 8 in.
Low	1 ft, 1½ in.

CHARACTERISTICS—Continued

Oxidizer lifter ORD No. 8019825—Continued	
Length	4 ft, 4⅝ in.
Width	4 ft, 4 in.
Oxidizer lifter 8166700:	
Weight	910 lb
Height, overall	13 ft, 11 in.
Height at hinges	5 ft, 9 in.
Height of oxidizer drum harness or cradle above ground level:	
High	12 ft
Low	1 ft, 1½ in.
Length	4 ft, 4⅝ in.
Width	4 ft, 4 in.
Oxidizer drum:	
Weight	0.5 lb
Height, overall	2 ft, 3 in.
Oxidizer aspirator bottle:	
Height, overall	11 in.
Width	4½ in.

PERFORMANCE

Oxidizer lifter (ORD No. 8019825), capacity, load	500 lb
Oxidizer lifter (ORD No. 8166700), capacity, load	500 lb
Oxidizer drum, capacity, load	212 ± 2 lb
Oxidizer aspirator bottle, capacity, load	2 qt

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-17.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

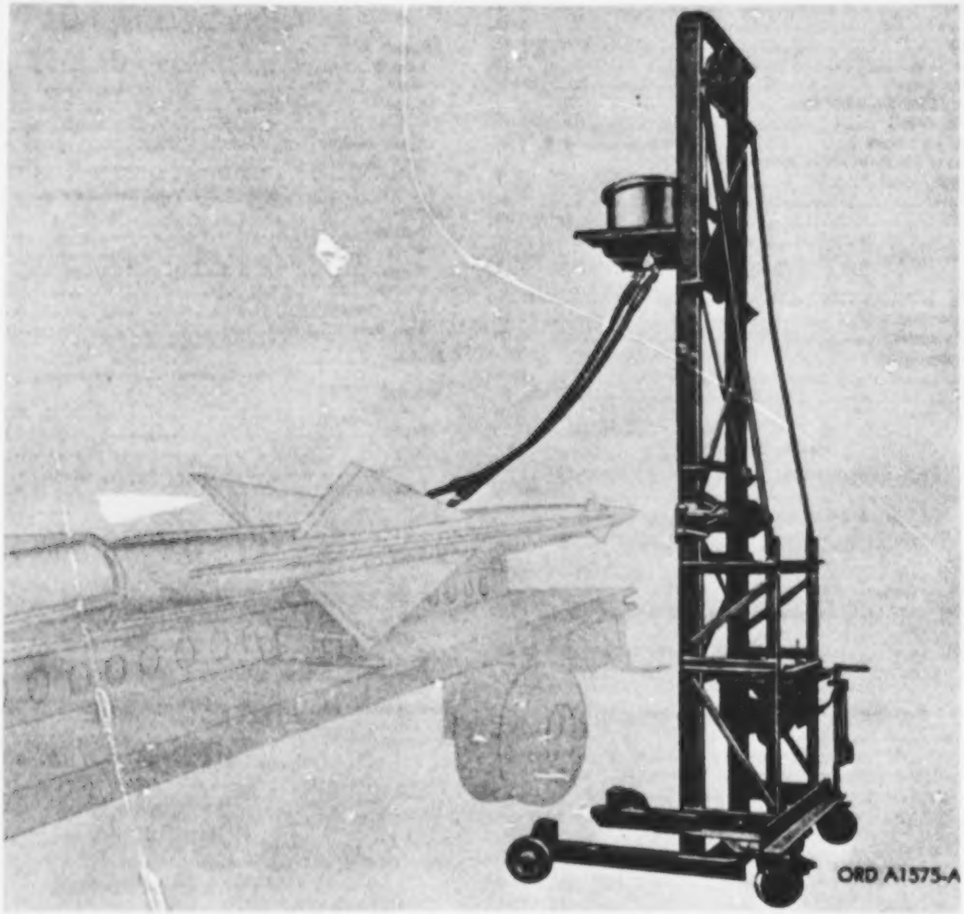
Shipped	
Length	8 ft, 5 in.
Width	4 ft, 11 in.
Height	5 ft, ¾ in.
Volume	210 cu ft
Gross weight	1,350 lb
Ship tons	5.25

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-4, SNL Y-17, SM 9-5-1430, 40, 50.

SERVICER, FUEL, GUIDED MISSILE: M3A1, W/E



Model	*Major item Line item No.*	*Federal stock No.*
M3A1	4-39116-15	1450-605-4730

General

SERVICER, FUEL, GUIDED MISSILE: M3A1, is utilized during the fuel filling of the missile. It is composed of fuel lifter (ORD No. 8529161) or fuel lifter (ORD No. 8529160), fuel drum, fuel aspirator bottle, and UDMH fuel bottle. The fuel lifter incorporates a fuel drum platform upon which a drum of M3 may be placed. The platform is elevated so that gravity flow can be utilized in fueling the missile. The fuel aspirator kit is used for removing, by aspiration, any excess fuel in the fuel tank of the missile body immediately after filling. The fuel operations are performed in the joining and service area with the missile on the missile flat bed trailer.

Both fuel lifters (ORD No. 8529160) and 8529161 are very similar in construction and operation.

Fuel lifter (ORD No. 8529160) is equipped with two stationary wheels at the front and two wheels of a handle assembly at the rear by which direction and movement at the lifter can be controlled.

Fuel lifter (ORD No. 8529161) is equipped with two stationary wheels at the front and two wheels which swivel at the rear. The right rear wheel of this lifter is mounted in the bottom of a steerer assembly which permits control of lifter movement in any direction.

Fuel lifter (ORD No. 8529160) incorporates two hinges while fuel lifter 8259161 incorporates two self-locking hinges.

Fuel lifter (ORD No. 8259161) utilizes a lock brake for a stabilizer.

Fuel lifter (ORD No. 8259161) incorporates a safety device to prevent the fuel drum platform from falling during propellant servicing of the missile, but fuel lifter (ORD No. 8529160) does not incorporate a safety device.

Data plate location

The guided missile fuel servicer M3 identification plate is installed at the left of the winch on the base frame on fuel lifter (ORD No. 8529160), and above the lock brake on the base frame on fuel lifter (ORD No. 8529161).

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Fuel lifter (ORD No. 8529161):

Height (overall)	13 ft, 10 in.
Height at hinges	5 ft, 9 in.

CHARACTERISTICS—Continued

Fuel lifter (ORD No. 8529161)—Continued	
Height of platform above ground level:	
High	12 ft
Low	6 in.
Length	4 ft, 2½ in.
Width	3 ft
Weight (total)	820 lb
Fuel lifter (ORD No. 8529160):	
Height, overall	13 ft, 8 in.
Height at hinges	5 ft, 9 in.
Height of platform above ground level:	
High	12 ft
Low	6 in.
Length	4 ft, 8½ in.
Width	3 ft
Weight (total)	810 lb
Fuel drum:	
Height	12 in.
Diameter	20 in.
Weight (total)	49 lb
Fuel aspirator bottle:	
Height	9 in.
Width	3½ in.
Weight (total)	5 lb

PERFORMANCE

Fuel lifter (ORD No. 8529161):	
Capacity	500 lb
Fuel lifter (ORD No. 8529160):	
Capacity	500 lb
Fuel drum:	
Capacity	48.5 to 49 lb
Fuel aspirator bottle:	
Capacity	1 qt
UDMH fill bottle:	
Capacity	correct amount for one missile fill

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-17.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M3

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

M3A1

Within Continental United States

Shipped	
Length	5 ft, 1½ in.
Width	3 ft, 5 in.
Height	8 ft, 10 in.
Volume	153.5 cu ft
Gross weight	1,449 lb
Ship tons	3.84

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-4, SNL Y-17, SM 9-5-1430, 40, 50.

SHIELD, GUIDED MISSILE LAUNCHER: M1

(Data to be published at a later date.)

Model	*Line item No.*	*Federal stock No.*
M1	9-45352 (Temp.)	1440–774–8176

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

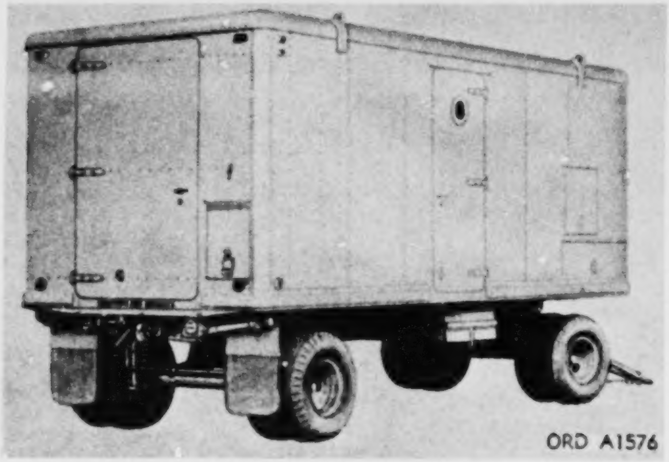
Shipped	
Length	
Width	
Height	
Volume	344.30 cu ft
Gross weight	3,300 lb
Ship tons	8.60

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, SM 9–5–1430, 40, 50.

SIMULATOR STATION, RADAR SIGNAL, GUIDED MISSILE SYSTEM. TRAILER MOUNTED: AN/MPQ-36 (15D2)



Major item

Model	*Line item No.*	*Federal stock No.*
AN/MPQ-36(15D2)	9-45769 (Temp.)	1430-612-7648

General

SIMULATOR STATION, RADAR SIGNAL, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: AN/MPQ-36, is composed of an air conditioner, guided missile system radar signal simulator station group, and TRAILER VAN: radar simulator, XM446*. The guided missile system radar-signal simulator station is a trailer mounted unit designed to aid in training personnel in the use of the NIKE-AJAX guided missile fire control system and the antiaircraft fire-control system M33. The simulator is completely housed in an Ordnance trailer, with all units securely mounted in place and electrically connected into a unified system.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Operator's Console:	
Auxiliary cabinet:	
Length	4 ft, 7⅛ in.
Width	2 ft, 1¼ in.
Height	3 ft, 4 in.
Weight	220 lb
Frequency converter:	
Length	6⅝ in.
Width	3½ in.
Height	5½ in.
Weight	2 lb, 13 oz

PERFORMANCE

Target simulation:	
Targets	one to six targets at any azimuth
Range	0 to 150,000 yd
Target simulation—Continued	
Size (width)	1 to 3 degrees
Velocity	0 to 2,000 knots/h.
Heading	0 to 6,400 mils
Turn rate	0 to 20 deg/sec
Climb rate	0 to 40,000 fpm
Dive rate	0 to 80,000 fpm
Altitude	0 to 80,000 fpm

EQUIPMENT

Basic Issue Items: See TM 9-1430-267-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	26 ft
Width	8 ft
Height	10 ft, 6 in.
Volume	2,234 cu ft
Gross weight	16,050 lb
Ship tons	55.85

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1430-267-12, TM 9-5018-1-1(C), SM 9-5-1430, 40, 50.

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* Data and characteristics will be added at a later date.

SIMULATOR GROUP: OA-758/MSE-2

Model	*Major item Line item No.*	*Federal stock No.*
OA-758/MSE-2	4-41037-10	4935-568-8184

General

SIMULATOR GROUP: OA-758/MSE-2 is used to test the missile tracking radar equipment by simulating the guidance set of a missile in flight and providing proper test responses.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	240 lb
Width	2 ft, $11\frac{15}{16}$ in.
Depth	1 ft, 10 in.
Height	2 ft, $3\frac{1}{2}$ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-8.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

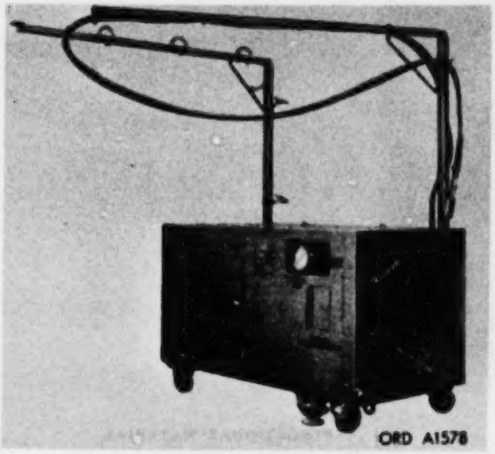
Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References: SNL Y-8, TM 9-5010-2-2.

STAND, TEST, HYDRAULIC SYSTEM, MISSILE: M14



Model	*Line item No.*	*Federal stock No.*
M14		4935-568-8254

General

STAND, TEST, HYDRAULIC SYSTEM, MISSILE: M14 consists of a vane-type pump, a 5-hp electric motor, a system relief valve, a safety relief valve, a bypass valve, three check valves, three filters, a solenoid valve, a system pressure gage, a motor switch box, and a 55-gallon reservoir. The reservoir contains hydraulic fluid for the operational test of the missile hydraulic system. The entire unit is enclosed in a cabinet with two fixed and two swivel caster wheels, held in position with a foot lock brake. Ventilation is provided by two vents in the back of the test stand. Eight depressions in the test stand top are provided for the placement of additional test equipment.

Differences among models

Data plate location

The identification plate is located on the front side of the hydraulic test stand cabinet.

Classification:

CHARACTERISTICS

Hydraulic test stand:	
Weight	1,500 lb
Length	4 ft, 11 in.
Width	2 ft, 8 in.
Height	3 ft, 2 in.
Hydraulic reservoir:	
Length	3 ft, 9 in.
Width	2 ft, 4 in.
Height	1 ft, 5 in.
Capacity	55 gal
Motor:	
Weight	216 lb
Length	2 ft, 1 in.
Width	1 ft, 7 in.
Height	1 ft, 1 in.
Rating	3 phase, 5 hp, 60-cycle, 1,200 rpm, 6 pole, 208/416 v
Pump:	
Weight	95 lb
Rating	2 stage, 2 gpm @ 2,000 psi
Inlet port	1 in.
Outlet port	¾ in.
Shaft	1 in.

CHARACTERISTICS—Continued

Accumulator:	
Weight	18.5 lb
Length	1 ft, 7 in.
Rating	200 cu in @ 650 psi
Diameter	5 in.
Safety relief valve:	
Weight	1.5 lb
Rating	1,750 to 1,950 psi
1 port	⅛ in.
3 ports	½ in.
System relief valve:	
Size	¾ in.
Rating	2,250 to 2,350 psi
Power supply cable:	
Diameter	⅝ in.
Length	50 ft
Rating	4 conductors
Hydraulic hoses (2):	
Diameter	⅝ in.
Length	17 ft, 10 in.
Rating	3,000 psi
Hydraulic hose and electrical cable booms, length	5 ft
Hydraulic pressure gage:	
Rating	0 to 3,000 psi
Diameter	4½ in.
Pipe connection	½ in.
Air pressure gage:	
Rating	0 to 3,000 psi
Diameter	2½ in.
Pipe connection	¼ in.
Hydraulic filters (2):	
Weight	2.7 lb
Length	4 in.
Width	4 in.
Height	7⅛ in.
Rating	500 to 3,000 psi

PERFORMANCE

Safety relief valve, operating range	1,750 to 1,950 psi
System relief valve, operating range	2,250 to 2,350 psi
Hydraulic pressure gage, operating range	0 to 3,000 psi
Air pressure gage, operating range	0 to 3,000 psi
Hydraulic filters (2), operating range	500 to 3,000 psi

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-20

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	5 ft, 11 in.
Width	3 ft, 1⅛ in.
Height	3 ft, 11⅛ in.
Volume	71.45 cu ft
Gross weight	1,448 lb
Ship tons	1.786

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–9502–2, SM 9–5–4935.

STOWAGE SET ASSEMBLY, LAUNCHER:

(Data to be published at a later date.)

Model	*Line item No.*	*Federal stock No.*
		1440-098-5853

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Stowage box	
Weight	180 lb
Length	7 ft, 4½ in.
Height	2 ft
Width (at base)	1 ft, 2 in.

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

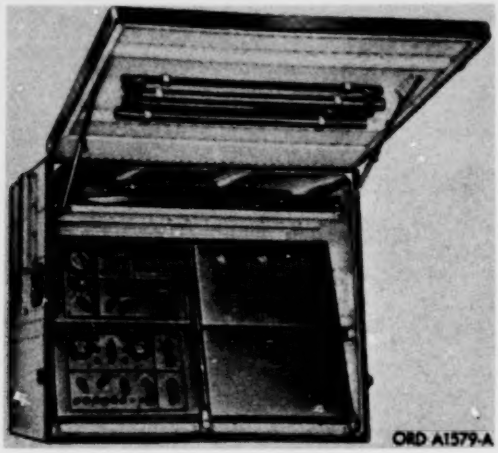
Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Reference: SNL Y-5.

TEST SET, GUIDED MISSILE: AN/DSM-12, AN/DSM-12A, AND AN/DSM-12B



Model	*Major item Line item No.*	*Federal stock No.*
AN/DSM-12	4-50487-10	4935-568-8252
AN/DSM-12A	4-50487-20	4935-612-6529
AN/DSM-12B		4935-784-3760

General

TEST SET, GUIDED MISSILE: AN/DSM-12, and AN/DSM-12A, AN/DSM-12B, consists of radio frequency test test group OA-767A/DSM, electrical power and servo test set TS-874/DSM, and case assembly (ORD No. 8160964). TEST SET, GUIDED MISSILE: AN/DSM-12B, consists of test set (ORD No. 9020330), electrical power and servo test set TS-874A/DSM, and accessory group (ORD No. 9027410), TEST SET, GUIDED MISSILE: AN/DSM-12, consists of radio frequency test set group OA-767/DSM and electrical power and servo test set group TS-874/DSM.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Guided missile test set AN/DSM-12:

(1) Portable electrical test set—ORD No. 8003329

Weight	462 lb
Width	3 ft, 10½ in.
Depth	2 ft, 4½ in.
Height	3 ft, 4 in.

(2) Antenna coupler CU-426 DSM-12:

Width	2 ft, 3 in.
Depth	10 in.
Height	1 ft, 5 in.

Guided missile test set AN/DSM-12—Continued

(2) Antenna coupler CU-426 DSM-12—Continued

Weight without case	85 lb
Weight with case	75 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-19.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

AN/DSM-12, AN/DSM-12A, AN/DSM-12B

Within Continental United States

Shipped 1 set per 2 boxes

	Box No. 1	*Box No. 2*
Length	3 ft	4 ft, 7 in.
Width	2 ft, 4 in.	3 ft, 2 in.
Height	2 ft, 7 in.	4 ft
Volume	17.5 cu ft	50.8 cu ft
Gross weight	200 lb	780 lb
Ship tons	0.44	1.27

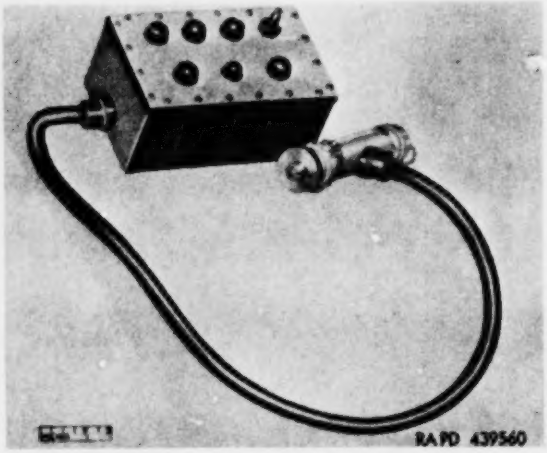
Outside Continental United States

Shipped

	Box No. 1	*Box No. 2*
Length		
Width		
Height		
Volume		
Gross weight		
Ship tons		

References: SNL Y-19, SM 9-5-4935, SB 9-122.

TEST SET, ELECTRIC CIRCUIT: TS-1053/G



RA PD 439560

Model	*Secondary item Line item No.*	*Federal stock No.*
TS-1053/G		4935-587-3379

General

TEST SET, ELECTRIC CIRCUIT: TS-1053/G, is used to determine technical service responsibility of the elevator-mounted launcher when a malfunction is found. The test set consists of a waterproof aluminum case and panel containing the batteries, switches, wiring, and indicator light. The test set is inserted between the elevator interlock cable and receptacle J9A on the interconnecting box.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

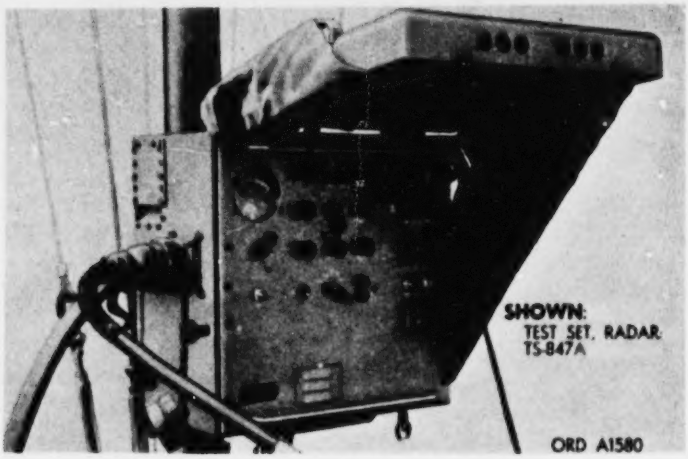
Shipped
  Length
  Width
  Height
  Volume
  Gross weight
  Ship tons

Outside Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Gross weight
  Ship tons

References: SNL Y-5, TM 9-5017-5.

TEST SET, RADAR: TS–847/MSW–1 AND TS–847A/MSW–1



SHOWN:
TEST SET, RADAR
TS-847A

ORD A1580

Model	*Major item* Line item No.	Federal stock No.
TS–847	4–50510–10	1430–568–8232
TS–847A	4–50510–20	1430–568–8233

General

TEST SET, RADAR: TS–847/MSW–1 or 847A/MSW–1 and the antenna and mast group provide means for testing the overall radio frequency performance of both the target tracking antenna-receiver-transmitter group and the missile tracking antenna-receiver-transmitter group of the NIKE–AJAX antiaircraft guided missile system. During operation, the radar test set generates a test signal which is transmitted from an antenna atop the mast assembly. This signal is received by the radars and is used to check the radar receiver and the azimuth and elevation pointing. The radar test set consists of two major units, the electrical equipment cabinet and the equipment drawer.

Differences among models

Classification: TS–847/MSW–1—Standard A (OTCM 36841) TS-847A/MSW–1—Standard B (OTCM 36841)

Data plate location

CHARACTERISTICS

TS–847:

Weight (uncrated)	135 lb
Height	1 ft, $8\frac{5}{16}$ in.
Width	1 ft, 7½ in.
Depth	2 ft

Electronic Data:

Input power	120 ± 6 volts, 400 ± 12 cycles ac, 28 ± 2 volts dc.
Power supply	+300-volt, 240-milliampere regulated rectifier and —250 volt, 50-milliampere regulated rectifier.
Power meter type and scale	DB meter with full scale sensitivity of +4 to —14 dbm in variable ranges accurate to ± 1.0 db.

Electronic Data—Continued

Oscillators (target and missile)	each employs a 2K25 reflex oscillator coupled to waveguide.
Fuse complement (total no.)	4
Electron tube complement (total no.)	26

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4–4.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

TS–847A:

Within Continental United States

Shipped 1 test set per 2 wooden boxes

	Box #1	*Box #2*
Length	2 ft, 7 in.	2 ft, 6 in.
Width	2 ft, 1⅛ in.	1 ft, 8⅝ in.
Height	2 ft, 3⅛ in.	2 ft, 3⅝ in.
Volume	12.2 cu ft	9.89 cu ft
Gross weight	221 lb	72 lb
Ship tons	0.305	0.247

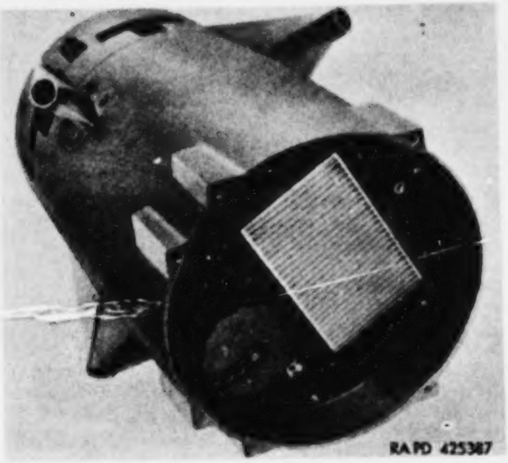
Outside Continental United States

Shipped

	Box #1	*Box #2*
Length		
Width		
Height		
Volume		
Gross weight		
Ship tons		

References: TM 9–5021–5, SNL Y4–4, SM 9–5–1430, 40, 50.

TEST SET, RADAR: AN/MPM–28, AN/MPM–28A, AND AN/MPM–28B



Model	*Line item No.*	*Federal stock No.*
AN/MPM–28	4–50500–10	1430–568–8236
AN/MPM–28A	4–41052–02	1430–568–8238
AN/MPM–28B	4–41052–01	1430–607–0348

General

Differences among models

Data plate location

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–6, Sec 2.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

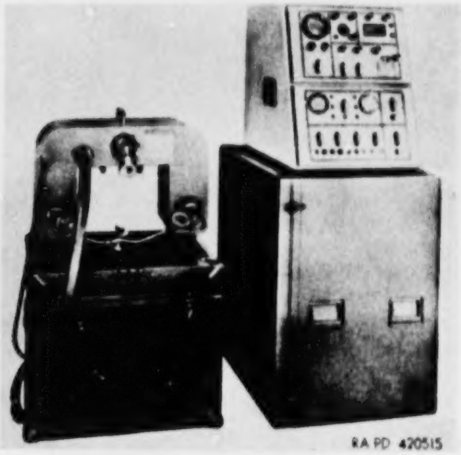
Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Reference: SNL Y–6–2.

TEST SET GROUP, GUIDED MISSILE: OA-767B/DSM



RA PD 420515

Model	*Secondary item Line item No.*	*Federal stock No.*
OA-767B/DSM		4935-606-3831

General

TEST SET GROUP, GUIDED MISSILE: OA-767B/DSM, consists of a case assembly, antenna coupler CU-522/DSM, radio frequency test set group OA-1176/DSM, storage trunk, waveguide assembly, and wiring assembly.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-18.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

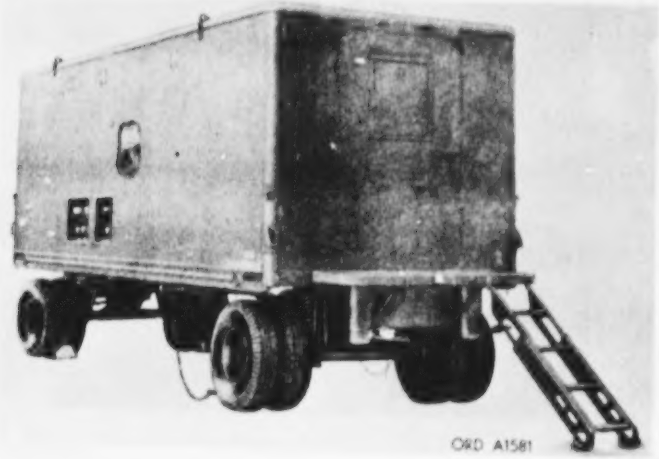
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Reference: SNL Y-18.

TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA–4 AND AN/MPA–4A



Model	*Major item Line item No.*	*Federal stock No.*
AN/MPA-4	4-56844-10	1430-568-8185
AN/MPA-4A	4-56844-15	1430-568-8186

General

TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-4 and AN/MPA-4A consist of tracking station group OA-866/MPA-4 and TRAILER VAN: radar tracking central M258,* and TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-4A consist of tracking station group OA-866/MPA-4 and radar tracking central van trailer M258A1.*

Differences among models

Data plate location

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Trailer mounted tracking station: AN/MPA-4:

Weight:	
(AN/MPA-4)	11,850 lb
(AN/MPA-4A)	12,370 lb
Length	21 ft, 4 in.
Width	8 ft
Height	10 ft, 9 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4-3.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

AN/MPA-4:

Within Continental United States

Shipped	
Length	21 ft, 6 in.
Width	8 ft
Height	10 ft, 9 in.
Volume	1,849 cu ft
Gross weight	11,850 lb
Ship tons	46.225

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

AN/MPA-4A:

Within Continental United States

Shipped	
Length	21 ft, 7 in.
Width	8 ft
Height	10 ft, 6 in.
Volume	1,812.4 cu ft
Gross weight	12,150 lb
Ship tons	45.31

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y4-3, TM 9-5010-2-1, SM 9-5-1430, 40, 50.

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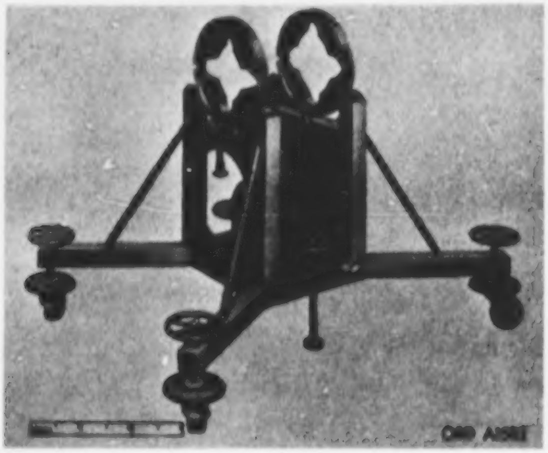
* For characteristics and data, see item in section 22.

TRUCK, GUIDED MISSILE BODY SECTION: M255



Model	*Major item Line item No.*	*Federal stock No.*
M255	4–59992–10	1450–568–8245

General

TRUCK, GUIDED MISSILE BODY SECTION: M255, holds the missile guidance set during test and assembly operations, and is used for transporting the guidance set within the assembly area. A dummy missile body section is bolted to the truck when not in use. Two handwheel truck brakes are provided on the truck to prevent rolling or pivoting while the missile guidance set is being tested.

Differences among models

Data plate location

A metal identification plate is attached on the side of the guided missile body section truck.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Height, overall	3 ft, 2 in. with rings in position
Height, overall	4 ft, 2 in. if lowered
Height, overall	4 ft, 4 in. if raised
Length (front to rear)	5 ft, 10¼ in.
Width (total)	4 ft, 3⅛ in.
Weight	309 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

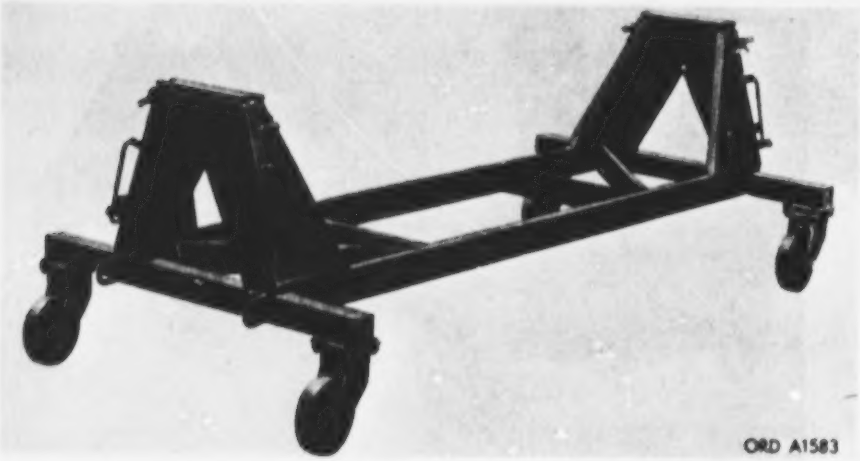
Shipped	
Length	6 ft, 4⅛ in.
Width	4 ft, 4⅝ in.
Height	3 ft, 8⅝ in.
Volume	102 cu ft
Gross weight	471.5 lb
Ship tons	2.55

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–9502–3, SM 9–5–1430, 40, 50.

TRUCK, GUIDED MISSILE ROCKET MOTOR: M254


ORD A1583

Model	*Major item Line item No.*	*Federal stock No.*
M254	4-59995-	1450-568-8242

General

TRUCK, GUIDED MISSILE ROCKET MOTOR: M254, is used to transport the JATO from the JATO assembly and storage areas to the joining area. The truck is composed of a welded steel rectangular bed mounted on swivel casters; clamps and eyebolts are incorporated on the upright supports of each end. Towing lugs, welded to the forward end of the truck, hold a hand bracket truck drawbar for towing the missile.

Differences among models

Data plate location

A metal identification plate is attached at the forward end of the rocket motor truck M254.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Height, overall	1 ft, 11⅝ in.
Length (front to rear)	9 ft, 7 in.
Width	3 ft, 9⅝ in.
Weight	299 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

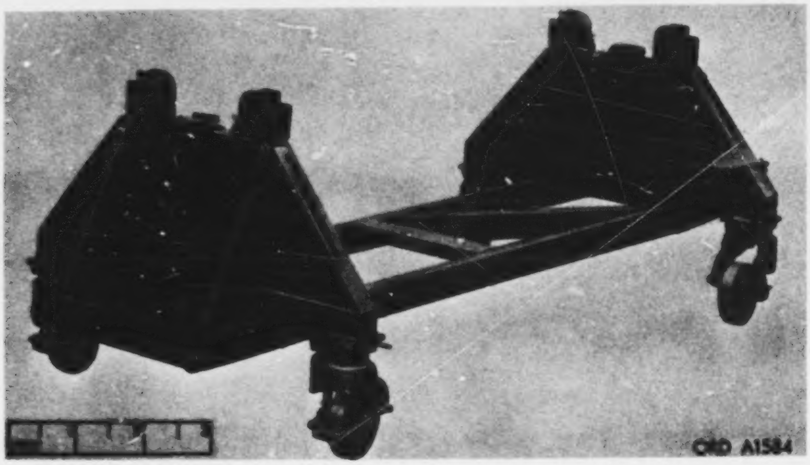
Shipped	
Length	10 ft, 3 in.
Width	4 ft, 2¼ in.
Height	2 ft, 6⅝ in.
Volume	108 cu ft
Gross weight	557 lb
Ship tons	2.7

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-3, SM 9-5-1430, 40, 50.

TRUCK, INERT GUIDED MISSILE: M256



Model	*Major item Line item No.*	*Federal stock No.*
M256	4-60022-10	1450-568-8243

General

TRUCK, INERT GUIDED MISSILE: M256, is used for supporting and positioning the missile body during assembly, testing, repairing, and transporting the missile body. The truck is a welded steel frame with two plain and two flanged rollers which hold the missile handling rings. Two ring brakes prevent rotation of the handling rings. A pair of towing lugs is provided at each end of the truck allowing a hand bracket truck drawbar to be installed for towing the missile.

Differences among models

Data plate location

A metal identification plate is attached at the forward end of the inert guided missile truck.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Height, overall	2 ft, 8½ in.
Length (front to rear)	10 ft, 1 in.
Width	3 ft, 4⅛ in.
Weight	356 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

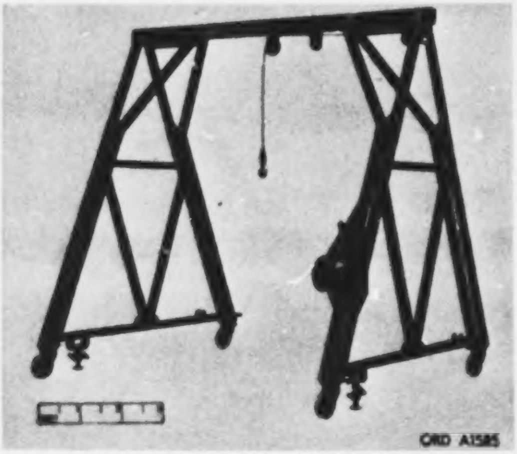
Shipped	
Length	11 ft
Width	4 ft, 2 in.
Height	2 ft, 9½ in.
Volume	127 cu ft
Gross weight	681 lb
Ship tons	3.175

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-3, SM 9-5-1430, 40, 50.

TRUCK, INERT GUIDED MISSILE: M257


ORD A1585

Model	Major item Line item No.	Federal stock No.
M257	4–60985–10	1450–565–8246

General

TRUCK, INERT GUIDED MISSILE: M257, is used during the uncrating of the missile body and JATO, during the joining of missile body and JATO on the RAIL LAUNCHING AND HANDLING M1A2* and during the installation of warheads in the missile body. The truck is constructed of welded tube and sheet metal; a manually operated, geared winch assembly is mounted on one leg. Two foot-operated truck locks, located on the lower struts of the truck structure, act as brakes for the truck.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Height, overall	10 ft, 8 in.
Length (front to rear)	8 ft, 6 in.
Width:	
Normal	5 ft
Extended	10 ft
Weight	802 lb

PERFORMANCE

Rated load capacity	2,000 lb
Extended	1,500 lb

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	12 ft, 8 in.
Width	3 ft, 11 in.
Height	4 ft, 2 in.
Volume	206 cu ft
Gross weight	1,196 lb
Ship tons	5.15

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-9502-3, SB 9-122, SM 9-5-1430, 40, 50.

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* For characteristics and data, see item on page 19-54.

END TRUSS, LOADING RACK, GUIDED MISSILE:

Model	*Major item Line item No.*	*Federal stock No.*
	4-61910-10	1440-337-8645

General

Difference among models

Data plate location

Classification: Standard B

CHARACTERISTICS

Number required	5
Length	7 ft, 2⅛ in.
Height (adjustable)	2 ft, 3 in. to 3 ft, 10 in.
Weight (each)	160 lb
Weight (total)	800 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	7 ft, 6 in.
Width	2 ft, 10 in.
Height	2 ft, 6 in.
Volume	53.2 cu ft
Gross weight	670 lb
Ship tons	1.33

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, TM 9-5010-2-2, SM 9-5-1430, 40, 50.

SIDE TRUSS, LOADING RACK, GUIDED MISSILE:

Model	*Major item Line item No.*	*Federal stock No.*
	4-61913-10	1440-800-2206

General

Differences among models

Data plate location

Classification: Standard B

CHARACTERISTICS

Number required	10
Length	10 ft, 3 in.
Height	1 ft, 7 in.
Weight (each)	133 lb
Weight (total)	1,520 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	10 ft, 3 in.
Width	3 ft, 2 in.
Height	2 ft, 1 in.
Volume	67.6 cu ft
Gross weight	970 lb
Ship tons	1.69

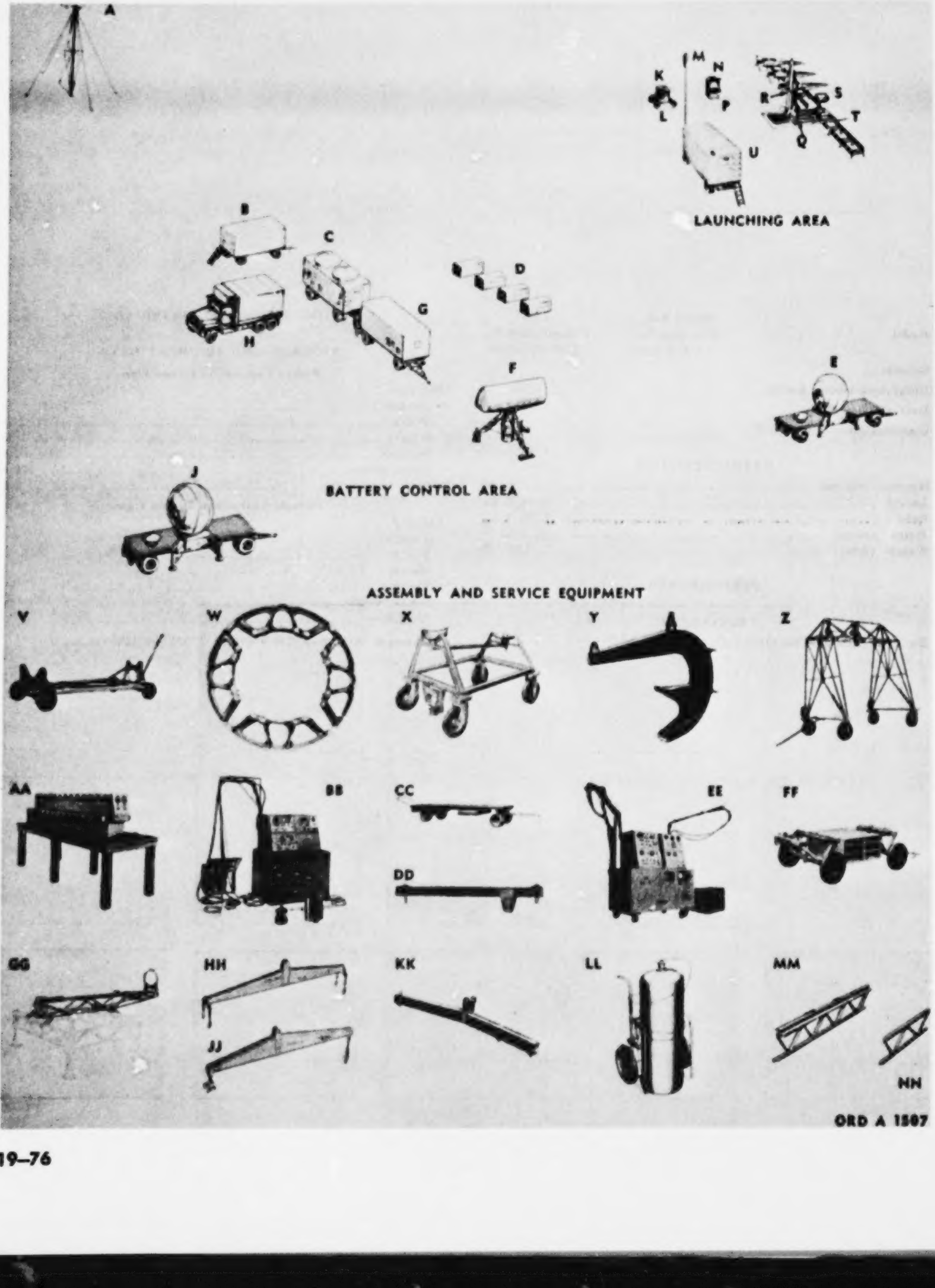
Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-5, TM 9-5010-2-2, SM 9-5-1430, 40, 50.

AIR DEFENSE MISSILE SYSTEM—NIKE-HERCULES

(Includes specially designed components of guided missile remote control systems; non-airborne guided missile launchers; specially designed trucks for use in transporting guided missiles; specially designed hoisting beams; a special purpose trailer; checkout equipment and test equipment specially designed for use with guided missiles and guided missile remote control systems; and an engine generator set.)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LAUNCHING AREA
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F
E
J
BATTERY CONTROL AREA
ASSEMBLY AND SERVICE EQUIPMENT
V
W
X
Y
Z
AA
BB
CC
DD
EE
FF
GG
HH
JJ
KK
LL
MM
NN

ORD A 1507

BATTERY CONTROL AREA
A—ANTENNA-MAST GROUP, COLLIMATION: OA-1600/T
B—ELECTRONIC SHOP, TRAILER MOUNTED:
C—TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-5
D—GENERATOR SET, DIESEL ENGINE:
E—ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA-1340/MPA
F—ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION:
G—DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA-19
H—FIRE UNIT INTEGRATED FACILITY (FUIF) TRUCK
J—ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-1487/MSA

LAUNCHING AREA
K—TEST SET, GUIDED MISSILE: AN/DSM-33
L—TRUCK, GUIDED MISSILE TEST SET: M461
M—SIMULATOR, GUIDED MISSILE, FLIGHT: OA-1643/M
N—CONTROL INDICATOR: C-2620/TSW
P—SIMULATOR GROUP: OA-2060/MSW-4
Q—LAUNCHER, MONORAIL, GUIDED MISSILE: M36
R—GUIDED MISSILE, AIR DEFENSE: XM6
S—CONTROL INDICATOR: C-2699/TSW
T—RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: M3
U—LAUNCHING CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4

ASSEMBLY AND SERVICE EQUIPMENT
V—TRUCK, GUIDED MISSILE BODY SECTION: XM473
W—RING, HANDLING, GUIDED MISSILE:
X—TRUCK, GUIDED MISSILE, NOSE SECTION: M489
Y—BEAM, HOISTING, GUIDED MISSILE, SOLID MOTOR: XM11
Z—HOISTING UNIT, PORTABLE, GUIDED MISSILE, MISSILE AND JATO UNIT JOINING: XM26E1
AA—RACK, BATTERY: MT-1498/G
BB—TEST SET, GUIDED MISSILE: (ORD NO. 9025326)
CC—TRAILER, FLATBED, GUIDED MISSILE: M261A1
DD—BEAM, HOISTING, GUIDED MISSILE: XM12
EE—TEST STAND, HYDRAULIC SYSTEM COMPONENTS:
FF—TRUCK, GUIDED MISSILE, ROCKET MOTOR: M442, W/E
GG—ADAPTER, ADJUSTABLE, TRAILER TO GUIDED MISSILE COMPONENT: M36, W/E
HH—BEAM, HOISTING, GUIDED MISSILE: BOOSTER CLUSTER, M13
JJ—BEAM, HOISTING, GUIDED MISSILE: COMPLETE MISSILE, XM14
KK—BEAM, HOISTING, GUIDED MISSILE, WARHEAD SECTION: M7E1
LL—FILLER, HYDRAULIC SYSTEM, GUIDED MISSILE:
MM—SIDE TRUSS, LOADING RACK, GUIDED MISSILE, LAUNCHER, TRACK ASSEMBLY LOADING RACK: M1
NN—RACK, LOADING, GUIDED MISSILE, SUPPORT ASSEMBLY LOADING RACK: M10

Page

ADAPTER, ADJUSTABLE, TRAILER TO GUIDED MISSILE COMPONENT: M36, w/e ... 19-79
ANTENNA-MAST GROUP, COLLIMATION: OA-1600/T, w/e ... 19-80
ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION: OA-1596/T and OA-1601/T, w/e ... 19-83
ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA-1340/MPA, w/e ... 19-85
ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-1487/MPA and OA-1487A/MPA (improved NIKE HERCULES) ... 19-86
BEAM, HOISTING, GUIDED MISSILE, BOOSTER CLUSTER: M8 ... 19-87
BEAM, HOISTING, GUIDED MISSILE, BOOSTER CLUSTER: M13 ... 19-88
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BEAM, HOISTING, GUIDED MISSILE: XM12 ... 19-90
BEAM, HOISTING, GUIDED MISSILE, SOLID MOTOR: XM11 ... 19-91
BEAM, HOISTING, GUIDED MISSILE, WARHEAD SECTION: M7 ... 19-92
CONTROL INDICATOR: C-2620/TSW (ORD No. 8027936 and ORD No. 8036022), w/e ... 19-93
CONTROL INDICATOR: C-2699/TSW (ORD No. 9032238) ... 19-94
DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA-19, w/e ... 19-95
ELECTRONIC SHOP, TRAILER MOUNTED: M304 and M304A1, w/e ... 19-96
GENERATOR SET, DIESEL ENGINE: ... 19-97
FILLER, HYDRAULIC SYSTEM, GUIDED MISSILE: M5 ... 19-98
FIRE UNIT INTEGRATED FACILITY (FUIF) TRUCK ... 19-99
TRUCK, GUIDED MISSILE TEST SET: M451, w/e ... 19-100
HOISTING UNIT, PORTABLE, GUIDED MISSILE, MISSILE AND JATO UNIT JOINING: M26 ... 19-101
LAUNCHER, MONORAIL, GUIDED MISSILE: M36, w/e ... 19-102
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LAUNCHING CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4, w/e ... 19-106
RACK, BATTERY: MT-1498/G, w/e ... 19-107
RACK, LOADING, GUIDED MISSILE, SUPPORT ASSEMBLY LOADING RACK: M10, w/e ... 19-108
RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: M2 and M3, w/e ... 19-109
RING, HANDING, GUIDED MISSILE: (ORD No. 8166435) ... 19-110
SIDE TRUSS, LOADING RACK, GUIDED MISSILE, LAUNCHER, TRACK ASSEMBLY, LOADING RACK: M1 ... 19-111
SIMULATOR GROUP: OA-2060/MSW-4, w/e (SIMULATOR GROUP: OA-2010/MSW-4 and SIMULATOR GROUP: OA-2060/MSW-4) ... 19-112
SIMULATOR, GUIDED MISSILE, FLIGHT: OA-1643/M ... 19-113
TEST SET, GUIDED MISSILE: (ORD No. 9025326) ... 19-114
TEST SET, GUIDED MISSILE: AN/DSM-33, w/e ... 19-115
TEST STAND HYDRAULIC SYSTEM COMPONENTS: (ORD No. 8027962), w/e ... 19-116
TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-5, w/e ... 19-117
TRAILER, FLAT BED, GUIDED MISSILE: M261 and M261A1, w/e (For characteristics and data, see item in section 21.)
TRUCK, GUIDED MISSILE, BODY SECTION: XM473, w/e ... 19-118
TRUCK, GUIDED MISSILE, NOSE SECTION: M489, w/e ... 19-119
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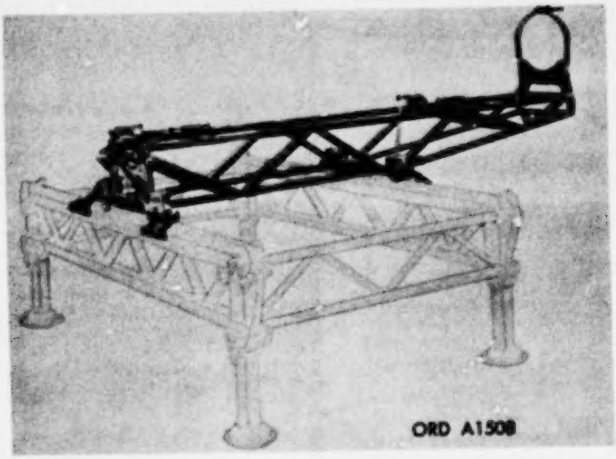
MODIFICATION KIT, GUIDED MISSILE LAUNCHER, FIELD INSTALLATION: M94, w/e ... 19-121
MODIFICATION KIT, GUIDED MISSILE LAUNCHER, FIELD INSTALLATION: M197 ... 19-122

The equipment required to complete the SYSTEM, which includes maintenance, repair and checkout equipment especially designed for use with guided missiles and guided missile control systems, will be added at a later date.

ADAPTER, ADJUSTABLE, TRAILER TO GUIDED MISSILE COMPONENT: M36, W/E



ORD A1508

Model	*Major item Line item No.*	*Federal stock No.*
M36	4–00012–01	1450–586–5016

General

ADAPTER, ADJUSTABLE, TRAILER TO GUIDED MISSILE COMPONENT: M36, w/e, is used to store a rear body section or a rocket motor cluster on a storage rack, or to transport a missile body or rocket motor cluster over rough terrain on a flatbed trailer M261A1. The adapter M36 is secured to the flatbed trailer, rocket motor cluster truck, or handling rack group with four locking devices. Two band assemblies and two clamps on the adapter M36 secure the rear body section to the adapter. Four of the eight supports on the adapter M36 secure the rocket motor cluster to the adapter.

Differences among models

Data plate location

Classification: Standard A (OTCM 36833)

CHARACTERISTICS

Weight	550 lb
Length	14 ft, 11 in.
Width	3 ft, 10 in.
Height	2 ft, 9 in.
Capacity	6,000 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: TM 9–450–250–12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

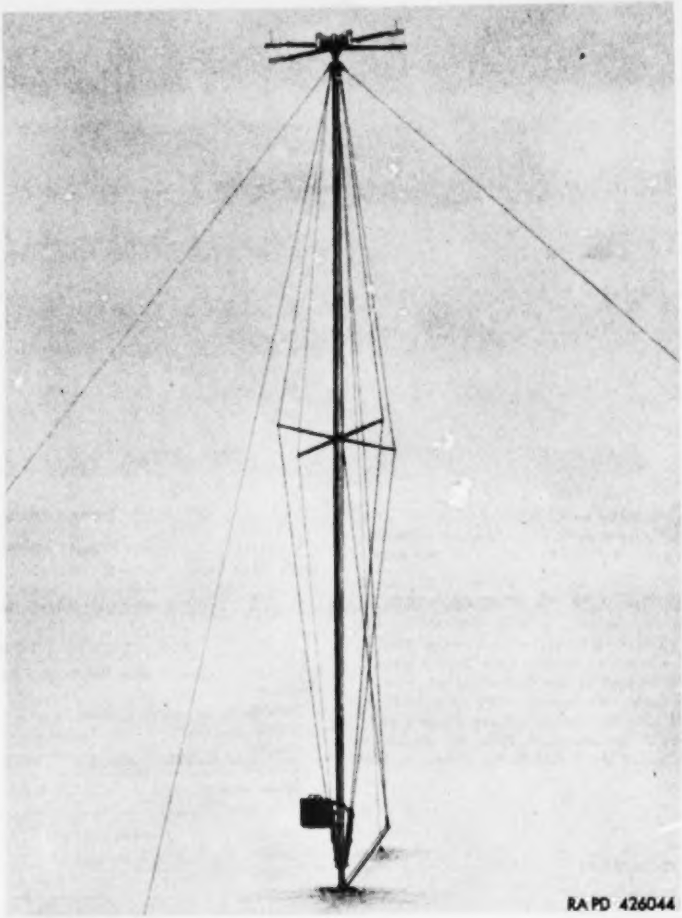
Shipped	
Length	15 ft, 7¼ in.
Width	4 ft, 3¼ in.
Height	3 ft, 6 in.
Volume	231.75 cu ft
Gross weight	1,200 lb
Ship tons	5.78

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y87–3; TM 9–1450–250–12, TM 9–1450–250–10P, TM 9–1450–250–20P/2, TM 9–1450–250–35P/2.

ANTENNA-MAST GROUP, COLLIMATION: OA-1600/T, W/E



RA PD 426044

Model	*Major item Line item No.*	*Federal stock No.*
OA-1600/T	4-00196-01	1430-586-5002

General

ANTENNA-MAST GROUP, COLLIMATION: OA-1600/T, w/e, is a tapering, tubular aluminum mast which measures approximately 60 feet in height. The collimation antenna-mast group OA-1600/T is used with TEST SET, RADAR TS-847A/MSW-1* for accurately boresighting the missile and target radars. In addition, the base of the mast serves as a mounting position for the test set and rack.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119)

CHARACTERISTICS

Weight	
Length	
Width	
Height	60 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1430-250-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Case #1

Within Continental United States

Shipped	
Length	10 ft, 6¼ in.
Width	1 ft, 10 in.
Height	11¾ in.
Volume	18.9 cu ft
Gross weight	370 lb
Ship tons	0.45

Outside Continental United States

Shipped	
Length	10 ft, 6¼ in.
Width	1 ft, 10 in.

---

* For characteristics and data, see item on page 19-66.

STORAGE AND SHIPMENT DATA—Continued

Case #1

Outside Continental United States—Continued

Shipped—Continued

Height	11⅝ in.
Volume	18.9 cu ft
Gross weight	370 lb
Ship tons	0.45

Case #2

Within Continental United States

Shipped

Length	3 ft, 1 in.
Width	2 ft, 5¼ in.
Height	1 ft, 5¼ in.
Volume	10.8 cu ft
Gross weight	213 lb
Ship tons	0.25

Outside Continental United States

Shipped

Length	3 ft, 1 in.
Width	2 ft, 5¼ in.
Height	1 ft, 5¼ in.
Volume	10.8 cu ft
Gross weight	213 lb
Ship tons	0.25

Case #3

Within Continental United States

Shipped

Length	3 ft, 1 in.
Width	2 ft, 5¼ in.
Height	1 ft, 5¼ in.
Volume	10.8 cu ft
Gross weight	221 lb
Ship tons	0.25

Outside Continental United States

Shipped

Length	3 ft, 1 in.
Width	2 ft, 5¼ in.
Height	1 ft, 5¼ in.
Volume	10.8 cu ft
Gross weight	221 lb
Ship tons	0.25

Case #4

Within Continental United States

Shipped

Length	6 ft, 6¾ in.
Width	1 ft, 9 in.
Height	1 ft, ¼ in.
Volume	19.0 cu ft
Gross weight	284 lb
Ship tons	0.47

Outside Continental United States

Shipped

Length	6 ft, 6¾ in.
Width	1 ft, 9 in.
Height	1 ft, 8¼ in.
Volume	19.0 cu ft
Gross weight	284 lb
Ship tons	0.47

Case #5

Within Continental United States

Shipped

Length	9 ft, 7½ in.
Width	2 ft, 2½ in.
Height	1 ft, 8¼ in.
Volume	19.0 cu ft
Gross weight	280 lb
Ship tons	0.47

Outside Continental United States

Shipped

Length	9 ft, 7½ in.
Width	2 ft, 2½ in.
Height	1 ft, ½ in.
Volume	20.8 cu ft
Gross weight	280 lb
Ship tons	0.5

Case #6

Within Continental United States

Shipped

Length	9 ft, 9½ in.
Width	1 ft, 10 in.
Height	1 ft, 1½ in.
Volume	20.0 cu ft
Gross weight	315 lb
Ship tons	0.5

Outside Continental United States

Shipped

Length	9 ft, 9½ in.
Width	1 ft, 10 in.
Height	1 ft, 1½ in.
Volume	20.0 cu ft
Gross weight	315 lb
Ship tons	0.5

Case #7

Within Continental United States

Shipped

Length	3 ft, 1½ in.
Width	2 ft, 1¼ in.
Height	1 ft, 6¼ in.
Volume	8.4 cu ft
Gross weight	218 lb
Ship tons	0.21

Outside Continental United States

Shipped

Length	3 ft, 1½ in.
Width	2 ft, 1¼ in.
Height	1 ft, 6¼ in.
Volume	8.4 cu ft
Gross weight	218 lb
Ship tons	0.21

Case #8

Within Continental United States

Shipped

Length	8 ft, 8 in.
Width	2 ft, 5½ in.
Height	1 ft, 11¾ in.
Volume	42.0 cu ft
Gross weight	535 lb
Ship tons	1.5

Outside Continental United States

Shipped

Length	8 ft, 8 in.
Width	2 ft, 5½ in.
Height	1 ft, 11¾ in.
Volume	42.0 cu ft
Gross weight	535 lb
Ship tons	1.5

Case #9

Within Continental United States

Shipped

Length	3 ft, 8 in.
Width	1 ft, 9 in.
Height	1 ft, 3¼ in.
Volume	8.2 cu ft
Gross weight	257 lb
Ship tons	0.2

Outside Continental United States

Shipped

Length	3 ft, 8 in.

STORAGE AND SHIPMENT DATA—Continued

Case #9—Continued

Outside Continental United States—Continued

Shipped—Continued

Width	1 ft, 9 in.
Height	1 ft, 3¼ in.
Volume	8.2 cu ft
Gross weight	257 lb
Ship tons	0.2

Case #10

Within Continental United States

Shipped

Length	9 ft, 4 in.
Width	1 ft, 6 in.
Height	1 ft
Volume	14.0 cu ft
Gross weight	280 lb
Ship tons	0.35

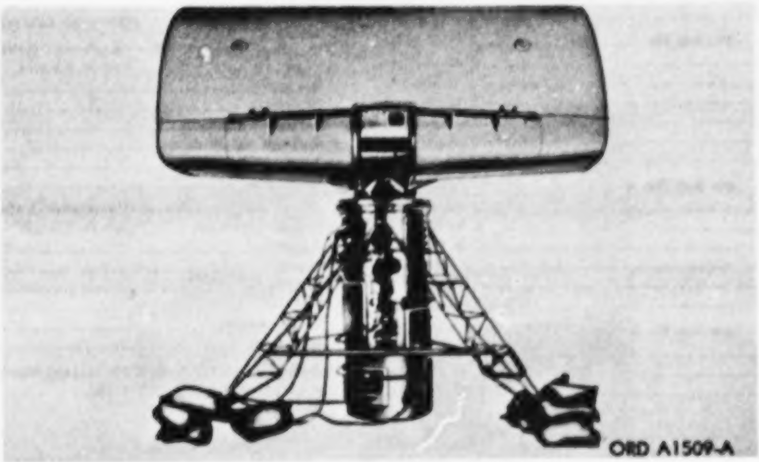
Outside Continental United States

Shipped

Length	9 ft, 4 in.
Width	1 ft, 6 in.
Height	1 ft
Volume	14.0 cu ft
Gross weight	280 lb
Ship tons	0.35

References: SNL Y-23, TM 9-1430-250-10, TM 9-1430-250-20P/1, TM 9-1430-250-35P/1, SB 9-199.

ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION: OA–1596/T AND OA–1601/T, W/E



Model	*Major item Line item No.*	*Federal stock No.*
OA–1596/T	4–00205–02	1430–593–9470
OA–1601/T	4–00205–01	1430–586–5001

General

ANTENNA-RECEIVER-TRANSMITTER GROUP, ACQUISITION: OA–1596/T and OA–1601/T, w/e, is a search type radar providing continuous surveillance of the defense area so that an enemy aircraft may be detected and designated as a target before it comes within range of the missile.

Differences among models

Data plate location

Classification:

OA–1596/T	Standard A
OA–1601/T	Standard A (OTCM 37119)

CHARACTERISTICS

Weight:	
OA–1596/T	2,500 lb
OA–1601/T	2,332 lb
Length:	
OA–1596/T	
OA–1601/T	15 ft, 6 in.
Width	
Height	13 ft, 6 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1430–250–10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1430–586–5001

Within Continental United States

Shipped	per crate No. 1
Length	15 ft. 6 in.
Width	6 ft, 3¾ in.
Height	7 ft, 8 in.
Volume	757.0 cu ft
Gross weight	3,900.0 lb
Ship tons	18.925

Shipped	per crate No. 2
Length	8 ft, 11 in.
Width	3 ft, 5¼ in.
Height	3 ft, 9½ in.
Volume	116 cu ft
Gross weight	745.0 lb
Ship tons	2.9

Shipped	per box No. 3
Length	4 ft, 4½ in.
Width	1 ft, 8½ in.
Height	3 ft, 6½ in.
Volume	26 cu ft
Gross weight	860.0 lb
Ship tons	0.65

Shipped	per box No. 4
Length	4 ft, 5½ in.
Width	4 ft, 2½ in.
Height	4 ft, 7 in.
Volume	86 cu ft
Gross weight	910.0 lb
Ship tons	2.15

Shipped	per box No. 5
Length	4 ft, 9½ in.
Width	4 ft, 4½ in.
Height	3 ft, 3¾ in.
Volume	70 cu ft
Gross weight	640.0 lb
Ship tons	1.75

Oversea Pack

Shipped	per box No. 1
Length	15 ft, 6 in.
Width	6 ft, 3¾ in.
Height	7 ft, 8 in.
Volume	757.0 cu ft
Gross weight	3,900 lb
Ship tons	18.93

Shipped	per box No. 2
Length	8 ft, 11 in.
Width	3 ft, 5¼ in.
Height	3 ft, 9½ in.
Volume	116 cu ft
Gross weight	745 lb

STORAGE AND SHIPMENT DATA—Continued

FSN 1430-556-5001

Oversea Pack—Continued

Shipped	**per box No. 2—Continued**
Ship tons	2.9
Shipped	**per box No. 3**
Length	4 ft, 4½ in.
Width	1 ft, 8½ in.
Height	3 ft, 5½ in.
Volume	26 cu ft
Gross weight	860 lb
Ship tons	0.65
Shipped	**per box No. 4**
Length	4 ft, 5½ in.
Width	4 ft, 2½ in.
Height	4 ft, 7 in.
Volume	86 cu ft
Gross weight	910 lb
Ship tons	2.15
Shipped	**per box No. 5**
Length	4 ft, 9½ in.
Width	4 ft, 4½ in.
Height	3 ft, 3¾ in.
Shipped	
Volume	70 cu ft
Gross weight	640 lb
Ship tons	1.75

FSN 1430-593-9470

Within Continental United States

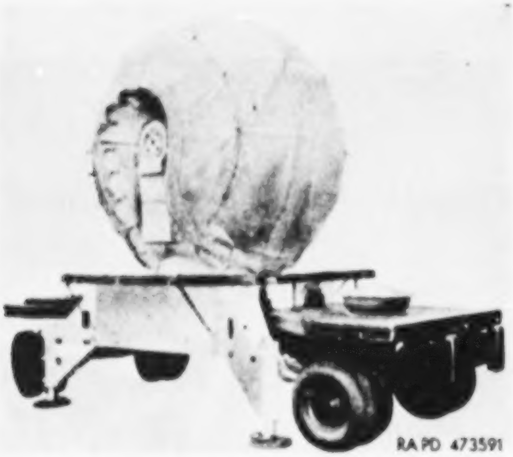
Shipped	**1 unit in 5 boxes**
Length	
Width	
Height	
Volume	1,073 cu ft
Gross weight	5,649 lb
Ship tons	26.8

Outside Continental United States

Shipped	**1 unit in 5 boxes**
Length	
Width	
Height	
Volume	1,073 cu ft
Gross weight	5,649 lb
Ship tons	26.8

References: SNL Y-25; TM 9-1430-250-10, TM 9-1430-250-20P/2, TM 9-1430-250-35P/2, SB 9-190.

ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA–1340/MPA, W/E



RA PD 473591

Model	*Major item Line item No.*	*Federal stock No.*
OA–1340/MPA	4–00212–00	1430–586–4996

General

ANTENNA - RECEIVER - TRANSMITTER GROUP, MISSILE TRACKING, TRAILER MOUNTED: OA–1340/MPA, w/e, consists of ANTENNA-RECEIVER-TRANSMITTER GROUP, MISSILE TRACKING: OA-1485/MPA and TRAILER, ANTENNA: M406*. Antenna-receiver-transmitter group, missile tracking, OA-1340/MPA functions with other equipment to supply continuous missile position information to the computer and to transmit commands from the computer to the missile.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	12,720 lb
Length	28 ft, 2 in.
Width	8 ft
Height	11 ft, 2 in.

PERFORMANCE

Classified

EQUIPMENT

Basic Issue Items: See TM 9–1430–250–10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 6 in.
Width	8 ft
Height	11 ft, 2 in.
Volume	1,965.6 cu ft
Gross weight	12,720 lb
Ship tons	49.1

Outside Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 6 in.
Width	8 ft
Height	11 ft, 2 in.
Volume	1,965.6 cu ft
Gross weight	12,720 lb
Ship tons	49.1

References: SNL Y-26, TM 9–1430–250–10, TM 9–1430–250–20P/3, TM 9–1430–250–35P/3; SB 9–199.

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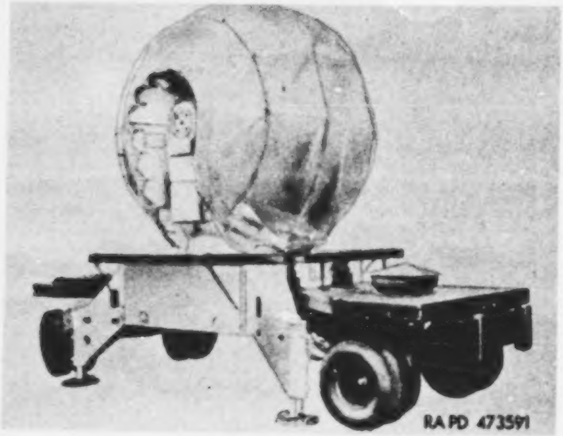
* Characteristics and data will be added at a later date.

ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-1487/MPA AND OA-1487A/MPA (IMPROVED NIKE HERCULES)



Model	*Major item Line item No.*	*Federal stock No.*
OA-1487/MPA, w/e	4-00217-01	1430-586-5000
OA-1487A/MPA	9-40026	1430-775-0266

General

ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING, TRAILER MOUNTED: OA-1487/MPA, w/e, consists of ANTENNA-RECEIVER-TRANSMITTER GROUP, TARGET TRACKING: OA-1488/MPA and TRAILER, ANTENNA:* M406. The major function of the target tracking, antenna-receiver-transmitter group OA-1487/MPA is to supply continuous target position information to the computer group of DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA-19. The antenna trailer M406* provides mobility when required; however, the target tracking antenna-receiver-transmitter group OA-1488/MSA may be emplaced with or without the trailer.

Differences among models

Data plate location

Classification

OA-1487/MPA	Standard A (OTCM 37119)
OA-1487A/MPA	Limited production (OTCM 37548)

CHARACTERISTICS

Weight:	
OA-1487/MPA	12,720 lb
OA-1487A/MPA	
Length:	
OA-1487/MPA	28 ft, 2 in.
OA-1487A/MPA	
Width:	
OA-1487/MPA	8 ft
OA-1487A/MPA	
Height:	
OA-1487/MPA	11 ft, 2 in.
OA-1487A/MPA	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1430-250-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1430-586-5000

Within Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 6 in.
Width	8 ft
Height	11 ft, 2 in.
Volume	1,965 cu ft
Gross weight	12,720 lb
Ship tons	49.1

Outside Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 6 in.
Width	8 ft
Height	11 ft, 2 in.
Volume	1,965 cu ft
Gross weight	12,720 lb
Ship tons	40.1

References: SNL Y-26; TM 9-1430-250-10, TM 9-1430-250-20P/3, TM 9-1430-250-35P/3; SB 9-199.

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* Characteristics and data will be added at a later date.

BEAM, HOISTING, GUIDED MISSILE, BOOSTER CLUSTER: M8

Model	*Major item Line item No.*	*Federal stock No.*
M8	4–01119–01	1450–587–3365

General

BEAM, HOISTING, GUIDED MISSILE, BOOSTER CLUSTER: M8, is used to lift the missile booster from the missile booster truck to TRAILER, FLAT BED, GUIDED MISSILE: M261A1* or the RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: XM3*.

Differences among models

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight	101 lb
Length	8 ft, 10⅝ in.
Width	1 ft, 5⅝ in.
Height	1 ft
Capacity	5,500 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 beam per box
Length	9 ft, 4 in.
Width	1 ft, 9⅝ in.
Height	1 ft, 3⅛ in.
Volume	22.25 cu ft
Gross weight	253 lb
Ship tons	0.56

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TB 9–1450–250–35/4, TM 9–1450–250–10, TM 9–1450–250–12.

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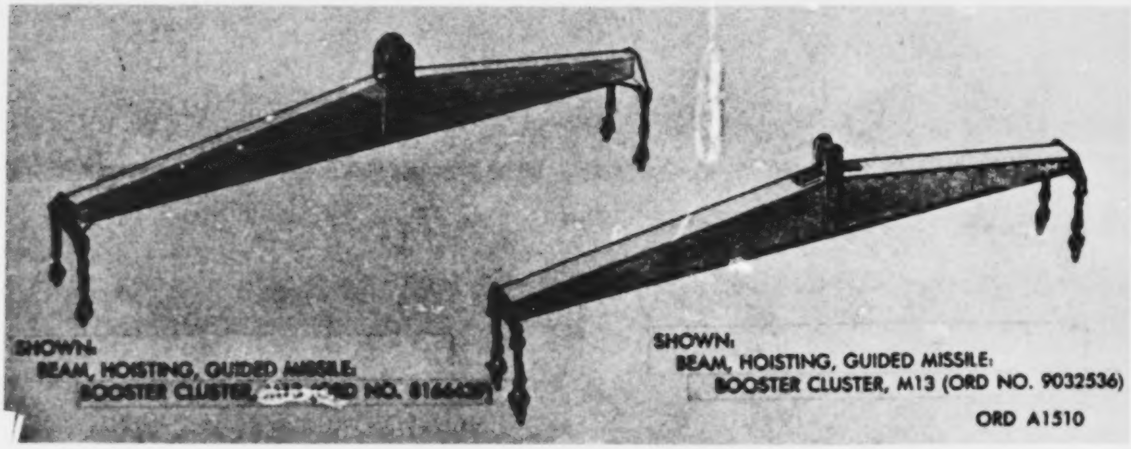
* For characteristics and data, see item on pages 19–109 and 19–118.

BEAM, HOISTING, GUIDED MISSILE: BOOSTER CLUSTER, M13


SHOWN:
BEAM, HOISTING, GUIDED MISSILE:
BOOSTER CLUSTER, M13 (ORD NO. 8166439)

SHOWN:
BEAM, HOISTING, GUIDED MISSILE:
BOOSTER CLUSTER, M13 (ORD NO. 9032536)

ORD A1510

Model	*Major item Line item No.*	*Federal stock No.*
M13	4–01119–06	1450–648–2101

General

BEAM, HOISTING, GUIDED MISSILE, BOOSTER CLUSTER: M13, is used to lift the missile booster from the missile booster truck to TRAILER, FLAT BED: GUIDED MISSILE: M261A1* or the RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: M3.* Beam, ORD NO. 8166439, is constructed of welded steel, while beam, ORD NO. 9032536, is constructed of riveted aluminum.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	60 lb
Length	9 ft, 1 in.
Width	1 ft, 1 in.
Height	1 ft, 9 in.
Capacity	5,500 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	12 ft, 4 in.
Width	1 ft, 9⅝ in.
Height	1 ft, 3⅞ in.
Volume	22.25 cu ft
Gross weight	263.0 lb
Ship tons	0.56

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL J753–1A; TM 9–1450–250–12, TM 9–1450–250–20P/4, TM 9–1450–250–35P/4, TB 9–1450–250–35/4.

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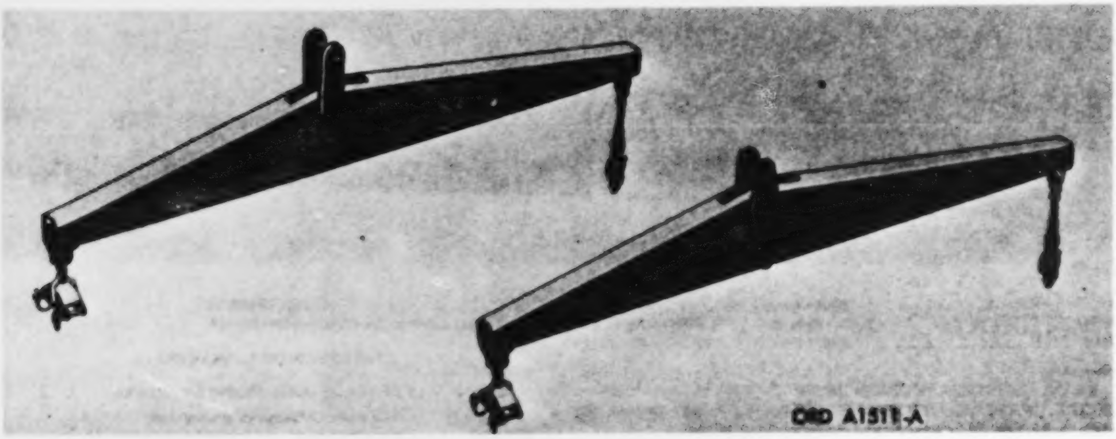
* For characteristic and data, see item in section 22 and on page 19–109.

BEAM, HOISTING, GUIDED MISSILE: COMPLETE MISSILE, M14



Model	*Line item No.*	*Federal stock No.*
M14	4–01123–02	1450–893–9473

General

BEAM, HOISTING, GUIDED MISSILE: COMPLETE MISSILE, M14, is used with the missile booster hoisting unit or TRUCK, WRECKER: M62* to lift the complete missile assembly from the missile truck onto the TRAILER, FLAT BED: GUIDED MISSILE M261A1* or the RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: DAC 1877-10 M3.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	68 lb
Length	8 ft, 2½ in.
Width	1 ft, 8¼ in.
Height	7½ in.
Capacity	5,279 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	8 ft, 6¾ in.
Width	1 ft, 11¼ in.
Height	2 ft, 9⅝ in.
Volume	13.28 cu ft
Gross weight	168 lb
Ship tons	0.33

Outside Continental United States

Shipped	
Length	8 ft, 6¾ in.
Width	1 ft, 11¼ in.
Height	2 ft, 9⅝ in.
Volume	13.28 cu ft
Gross weight	168 lb
Ship tons	0.33

References: SNL J-753-1, TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/4, TM 9-1450-250-35P/4, SB 9-199.

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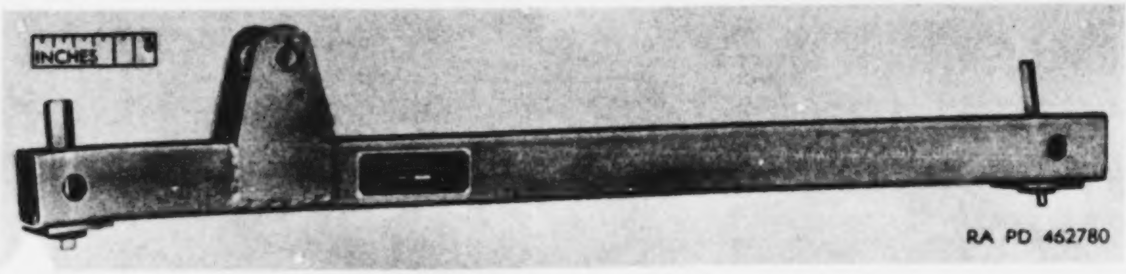
* For characteristic and data, see item in section 22 and on page 19-109.

BEAM, HOISTING, GUIDED MISSILE: M12



RA PD 462780

Model	*Major item Line item No.*	*Federal stock No.*
M12	4-0114-02	1450-593-9474

General

BEAM, HOISTING, GUIDED MISSILE: M12, is used with a TRUCK, WRECKER: M62* or hoisting unit for transferring the main body (aft body section and forward body section).

Differences among models

Data plate location

The identification plate is located to the right of the supporting bracket.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	24 lb
Length	4 ft, ⅛ in.
Width	8¼ in.
Height	3 in.
Capacity	1,047 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 beam per box

Length	4 ft, 4½ in.
Width	11⅞ in.
Height	7½ in.
Volume	2.50 cu ft
Gross weight	56 lb
Ship tons	0.0625

Outside Continental United States

Shipped

Length	4 ft, 4½ in.
Width	11⅞ in.
Height	7½ in.
Volume	2.50 cu ft
Gross weight	56 lb
Ship tons	0.0625

References: SNL J-753-1 (SM 9-5-1430, 40, 50), TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/4, TM 9-1450-250-35P/4.

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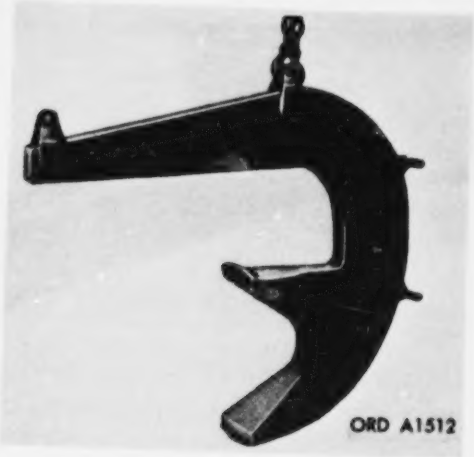
*Characteristics and data will be added at a later date.

BEAM, HOISTING, GUIDED MISSILE, SOLID MOTOR: XM11



Model	*Major item Line item No.*	*Federal stock No.*
XM11	4–01125–01	1450–593–9476

General

BEAM, HOISTING, GUIDED MISSILE, SOLID MOTOR: XM11, is used to remove the missile motor from the shipping container and place it inside the missile assembly.

Differences among models

Data plate location

Classification: Standard A (OTCM 37719).

CHARACTERISTICS

Weight	376 lb
Length	5 ft, $8\frac{1}{8}$ in.
Width	4 ft, $11\frac{1}{16}$ in.
Height	$9\frac{1}{16}$ in.
Capacity	8,000 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1450–250–12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 beam per box

Length	6 ft, $\frac{5}{8}$ in.
Width	5 ft, $3\frac{5}{8}$ in.
Height	1 ft, $4\frac{1}{8}$ in.
Volume	42.50 cu ft
Gross weight	580.0 lb
Ship tons	1.06

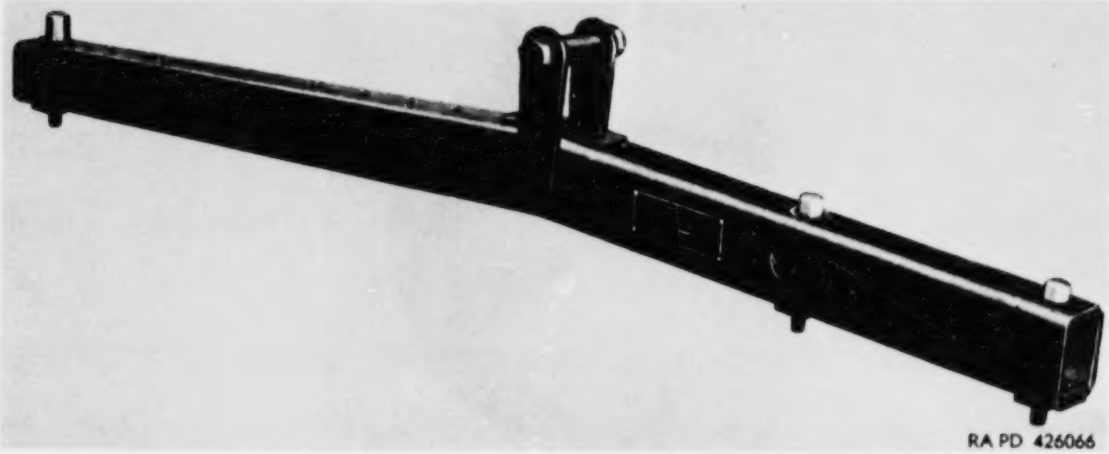
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL J–753–1 (SM 9–5–1430, 40, 50), TM 9–1450–250–12, TM 9–1450–250–10, TM 9–1450–250–20P/4, TM 9–1450–250/35P/4, SB 9–199.

BEAM, HOISTING, GUIDED MISSILE, WARHEAD SECTION: M7



RA PD 426066

Model	*Major item Line item No.*	*Federal stock No.*
M7	4–01126–02	1450–601–9629

General

BEAM, HOISTING, GUIDED MISSILE, WARHEAD SECTION: M7 is used to support and position the warhead body section during installation in the missile assembly.

Differences among models

Data plate location

The identification plate is located to the right of the supporting bracket.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	26 lb
Length	5 ft, 4 in.
Width	5 in.
Height	14 in.
Capacity:	
Beams 1001 through 1046 and 1050 through 1541	1,150 lb
Beams 1542 and subsequent	1,260 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1450–250–12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 beam per box
Length	5 ft, 9¼ in.
Width	1 ft, 2⅜ in.
Height	7⅞ in.
Volume	4.38 cu ft
Gross weight	73 lb
Ship tons	0.1095

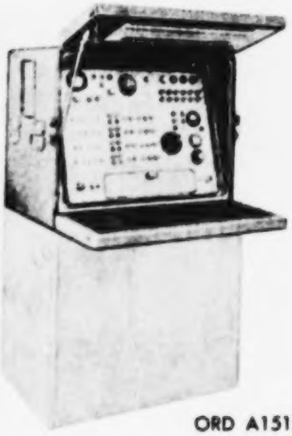
Outside Continental United States

Shipped	
Length	5 ft, 9¼ in.
Width	1 ft, 2⅜ in.
Height	7⅞ in.
Volume	4.38 cu ft
Gross weight	73 lb
Ship tons	0.1095

References: SNL J–753–1, SM 9–5–1430, 40, 50, TM 9–1450–250–12, TM 9–1450–250–10, TM 9–1450–250–20P/4, TM 9–1450–250–35P/4, SB 9–199.

CONTROL INDICATOR: C–2620/TSW (ORD NO. 8027936 AND ORD NO. 8036022), W/E

SHOWN:
CONTROL INDICATOR:
C-2620/TSW
(ORD NO. 8027936)



ORD A1513

Model	*Major item Line item No.*	*Federal stock No.*
C–2620/TSW (ORD No. 8027936)	4–10833–01	1440–586–5009
(ORD No. 8036022)	4–10833–03	1440–765–4305

General

CONTROL INDICATOR: C–2620/TSW (ORD NO. 8027936 or ORD NO. 8036022), w/e, is mounted on top of section launcher simulator group and connected by cable to each CONTROL INDICATOR: C–2699/TSW* in launching section and to LAUNCHER CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4.* The control panel of control indicator C–2620/TSW contains all controls and indicators required by the operator for preparation of the missile for firing.

Differences among models

Data plate location

Classification

C–2620/TSW (ORD No. 8027936)	Standard A (OTCM 36913)
(ORD No. 8036022)	Standard A (OTCM 37119)

CHARACTERISTICS

Weight:	
FSN 1440–586–5009	302 lb
FSN 1440–765–4305	
Length:	
FSN 1440–586–5009	2 ft, 2 in.
FSN 1440–765–4305	
Width:	
FSN 1440–586–5009	2 ft, 9 in.
FSN 1440–765–4305	
Height:	
FSN 1440–586–5009	2 ft, 4 in.
FSN 1440–765–4305	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1440–250–10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN–1440–586–5009

Within Continental United States

Shipped	1 control indicator per box
Length	3 ft, 8¼ in.
Width	2 ft, 9¼ in.
Height	2 ft, 11¼ in.
Volume	30 cu ft
Gross weight	440 lb
Ship tons	0.75

Outside Continental United States

Shipped	1 control indicator per box
Length	3 ft, 8¼ in.
Width	2 ft, 9¼ in.
Height	2 ft, 11¼ in.
Volume	30 cu ft
Gross weight	440 lb
Ship tons	0.75

FSN–1440–765–4305

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–1440–250–10, TM 9–1440–250–20P/1, TM 9–1440–250–35P/1 SB 9–199.

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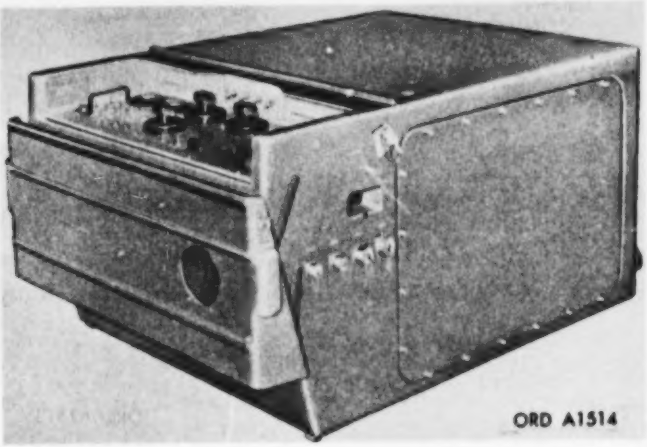
* For characteristics and data, see item on pages 19–94 and 19–106.

CONTROL INDICATOR: C–2699/TSW (ORD NO. 9032238)



Model	*Major item Line item No.*	*Federal stock No.*
C-2699/TSW	4-10835-01	1440-620-9287

General

CONTROL INDICATOR: C-2699/TSW (ORD NO. 9032238) is connected by cable to LAUNCHER, MONORAIL, GUIDED MISSILE: M36,* to the equipment in the section control shelter or section control room, and to the missile test stations on the loading racks. The control indicator has two functions, missile testing and missile monitoring. The control indicator is housed in a skid-mounted metal cabinet.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	567 lb
Length	4 ft, 8 in.
Width	3 ft, 4 in.
Height	2 ft, 3¼ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1440-250-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	5 ft, 2¾ in.
Width	3 ft, 8¾ in.
Height	2 ft, 10¾ in.
Volume	56.5 cu ft
Gross weight	857 lb
Ship tons	1.40

Outside Continental United States

Shipped	
Length	5 ft, 2¾ in.
Width	3 ft, 8¾ in.
Height	2 ft, 10¾ in.
Volume	56.5 cu ft
Gross weight	857 lb
Ship tons	1.40

References: TM 9-1440-250-10, TM 9-1440-250-20P/1, TM 9-1440-250-35P/1.

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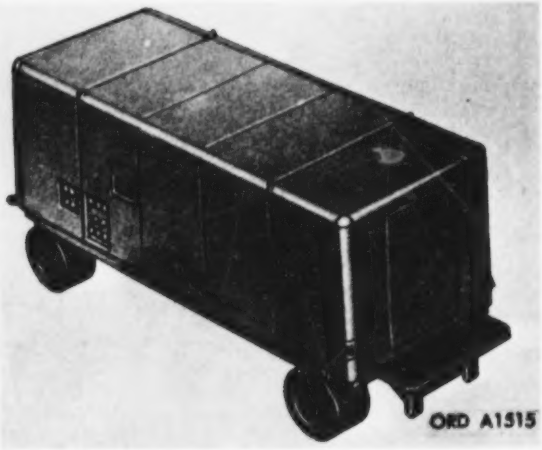
* For characteristics and data, see item on page 19-102.

DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA–19, W/E



Model	*Major item Line item No.*	*Federal stock No.*
AN/MSA–19	4–12470–01	1430–586–4997

General

DIRECTOR STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MSA–19, w/e, consists of DIRECTOR-COMPUTER GROUP, GUIDED MISSILE: OA–1479/MSA–19; TRAILER, GUIDED MISSILE, DIRECTOR STATION: M424*; DOLLY, TRAILER, FRONT, DIRECTOR STATION: M429A1Q;* and DOLLY, TRAILER, REAR, DIRECTOR STATION: M430A1Q*. The director station provides housing primarily for computing equipment, battery control equipment, and the acquisition radar controls and indicators.

The computing equipment coordinates information received from the target and missile track radars in order to derive directional commands for the missile that will enable it to intercept a target in the shortest possible time. The battery control equipment provides the battery commander with information concerning target and missile data, a record of the sequence of events during an engagement, designates the selected target and provides the target track radar operator with the position coordinates of the selected target.

Differences among models: Classified.

Classification: Standard A (OTCM 37119).

Data plate location

CHARACTERISTICS

Length	(approx) 22 ft
Width	(approx) 8 ft
Height	(approx) 10 ft
Weight	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1430–250–10, appendix II.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 5 in.
Width	7 ft, 11 in.
Height	10 ft, 8 in.
Volume	1801.0 cu ft
Gross weight	13,591.0 lb
Ship tons	45

Outside Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 5 in.
Width	7 ft, 11 in.
Height	10 ft, 8 in.
Volume	1801.0 cu ft
Gross weight	13,591.0 lb
Ship tons	45

References: SB 9–199, TM 9–1430–250–10, TM 9–1430–250–20P/4, TM 9–1430–250–35P/4, SM 9–5–1430, 40, 50.

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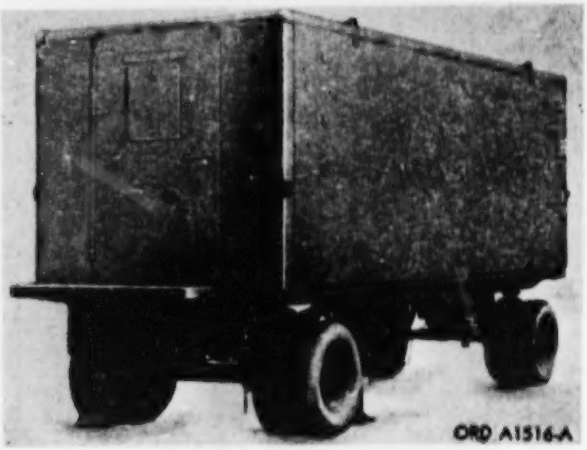
*Characteristics and data will be added at a later date.

ELECTRONIC SHOP, TRAILER MOUNTED: M304 AND M304A1, W/E



ORD A1516-A

Model	*Major item* *Line item No.*	*Federal stock No.*
M304	4-18481-	1430-568-8176
M304A1	4-18481-	1430-568-8177

General

ELECTRONIC SHOP, TRAILER MOUNTED: M304 AND M304-A1, w/e, provides workspace and facilities for organizational maintenance activities and storage space for all authorized tools and repair parts. Facilities for organizational maintenance activities and parts cabinets for storage of tools and repair parts are provided in an interconnecting corridor at permanent sites.

Differences among models

Data plate location

The identification plate is located on the rear end in the lower right-hand corner.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	
Length	
Width	
Height	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y4-6.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1430-568-8176

Within Continental United States

Shipped	
Length	19 ft, 8 in.
Width	8 ft
Height	10 ft, 9 in.
Volume	1668 cu ft
Gross weight	13,195 lb
Ship tons	42.2

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1430-568-8177

Within Continental United States

Shipped	
Length	18 ft
Width	7 ft, 10⅝ in.
Height	10 ft, 6 in.
Volume	1622 cu ft
Gross weight	11,989 lb
Ship tons	42.2

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y4-6, SB 9-199.

GENERATOR SET, DIESEL ENGINE:

ORD A1517

Model	*Line item No.*	*Federal stock No.*
		6115-538-8776

General

GENERATOR SET, DIESEL ENGINE: consists of a mounted electrical generator and a prime mover. The prime mover a type that is liquid cooled (radiator type) and is cranked by an electric motor.

Differences among models

Data plate location

The identification plate is located at the rear end near the top.

Classification:

CHARACTERISTICS

Generator:

Cycles	400
Line-to-line voltage	208 volt or 416 volt
Line-to-neutral voltage	120 volt or 240 volt
Phase	3
Power factor	0.8

PERFORMANCE

Generator rating	45kw

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 generator per crate

Length	10 ft, 5 in.
Width	3 ft, 9 in.
Height	5 ft, 11 in.
Volume	247.0 cu ft
Gross weight	4,514.0 lb
Ship tons	6.191

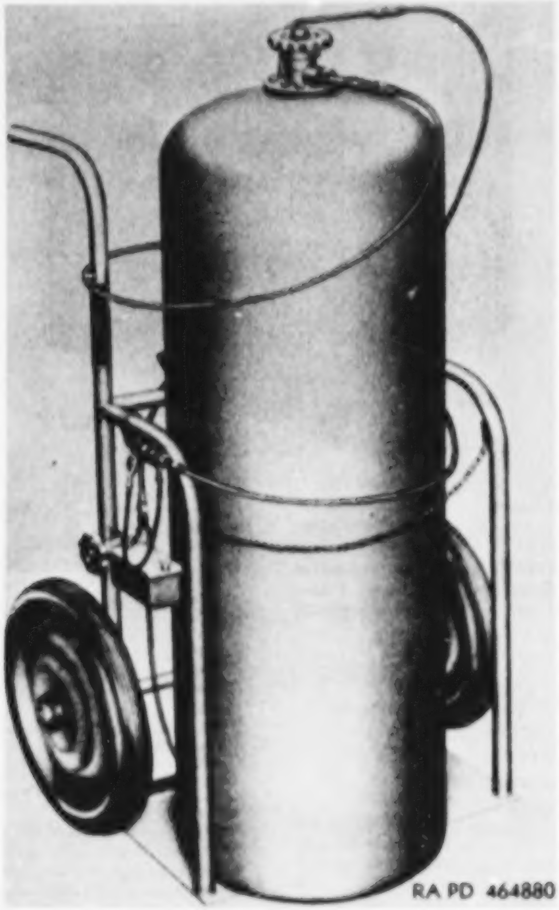
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 5-5432-1, TB 5-5432-1, TM 5-5329-1, TB 5-5329-1, TM 5-5321-1.

FILLER, HYDRAULIC SYSTEM, GUIDED MISSILE: M5



RA PD 464880

Major item

Model	*Line item No.*	*Federal stock No.*
M5	4-14895-01	1450-478-5270

General

FILLER, HYDRAULIC SYSTEM, GUIDED MISSILE: M5, is used for filling auxiliary power supply unit in missile with ethylene oxide.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	73 lb
Length	3 ft, 4 in.
Width	2 ft, 8 in.
Height	1 ft, 5⅝ in.
Capacity	400 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 filler box
Length	3 ft, 9⅝ in.
Width	2 ft, 6⅝ in.
Height	1 ft, 11⅝ in.
Volume	20.6 cu ft
Gross weight	142.0 lb
Ship tons	0.515

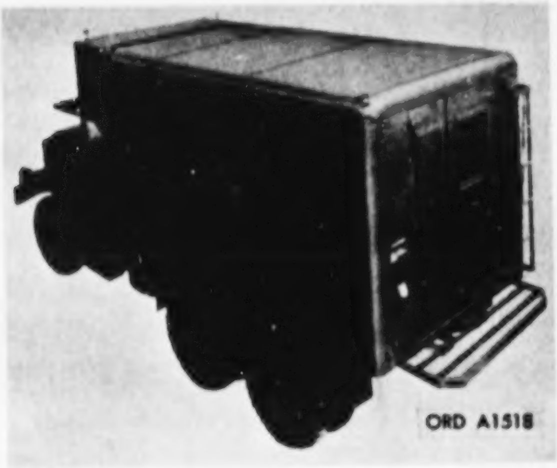
Outside Continental United States

Shipped	1 filler box
Length	3 ft, 9⅝ in.
Width	2 ft, 6⅝ in.
Height	1 ft, 11⅝ in.
Volume	20.6 cu ft
Gross weight	142.0 lb
Ship tons	0.515

References: SNL Y91, TM 9-1450-250-35P/5, SB 9-199, SNL Y091 (SM 9-5-1430, 40, 50).

FIRE UNIT INTEGRATED FACILITY (FUIF) TRUCK

(Data to be published at a later date.)


ORD A1518

Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

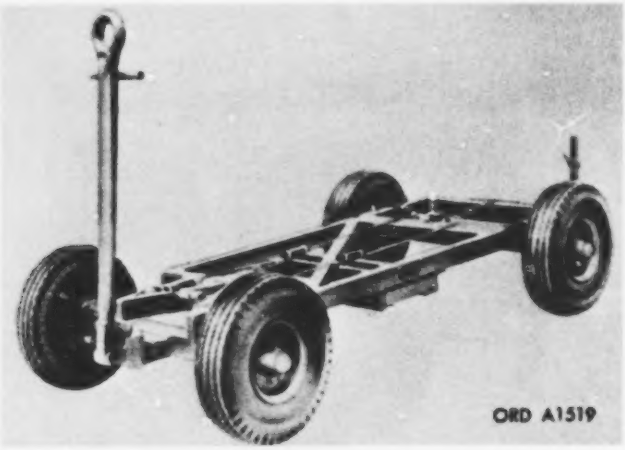
Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References:

TRUCK, GUIDED MISSILE TEST SET: M451, W/E



Model	*Major item* *Line item No.*	*Federal stock No.*
M451	4-60959-01	4935-586-5017

General

TRUCK, GUIDED MISSILE TEST SET: M451, w/e, is used to transport a launching area Hercules missile test set and the antenna coupler within the launching area. Straps on the truck secure the test set and coupler to the truck. The truck is equipped with a parking brake on the rear wheels.

Differences among models

Data plate location

The identification plate is located on the left side of the frame above the seat assembly.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	800 lb
Length	7 ft, 10 in.
Width	3 ft, 9 in.
Height	2 ft, 2 in.
Capacity	1,000 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

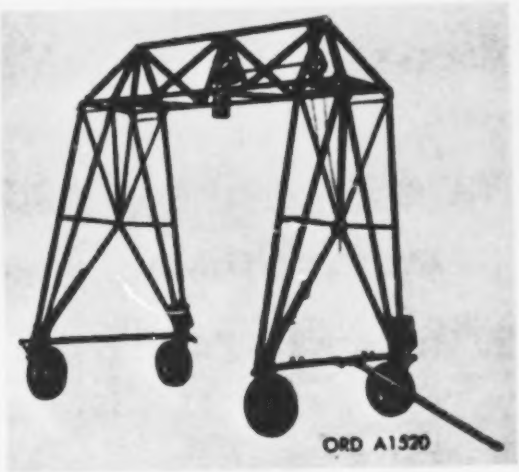
Shipped	
Length	8 ft, 5 in.
Width	4 ft, 5 in.
Height	1 ft, 7½ in.
Volume	66 cu ft
Gross weight	810.0 lb
Ship tons	1.625

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/3, TM 9-1450-250-35P/3, SB 9-199.

HOISTING UNIT, PORTABLE, GUIDED MISSILE, MISSILE AND JATO UNIT JOINING: M26



Model	*Major item Line item No.*	*Federal stock No.*
M26	4-17817-02	1450-593-9477

General

HOISTING UNIT, PORTABLE, GUIDED MISSILE, MISSILE AND JATO UNIT JOINING: M26, is used for joining missile and rocket motor on launching unit.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	2,365 lb
Length	14 ft, 2 in.
Width	5 ft, 11 in.
Height	8 ft, 5½ in.
Capacity	6,700 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 hoisting unit per crate

Length	15 ft, 2½ in.
Width	4 ft, ½ in.
Height	6 ft, 7⅝ in.
Volume	416.0 cu ft
Gross weight	3153 lb
Ship tons	10.4

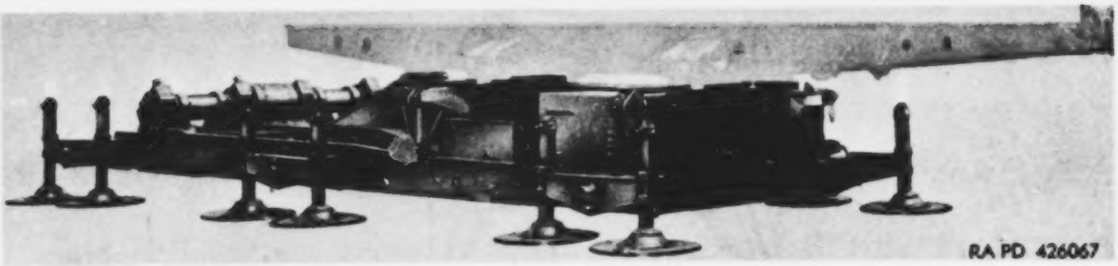
Outside Continental United States

Shipped

Length	15 ft, 2½ in.
Width	4 ft, ½ in.
Height	6 ft, 7⅝ in.
Volume	416.0 cu ft
Gross weight	3153 lb
Ship tons	10.4

References: SB 9-190, SNL J753-1, TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/4, TM 9-1450-250-35P/4.

LAUNCHER, MONORAIL, GUIDED MISSILE: M36, W/E



RA PD 426067

Model	*Major item* *Line item No.*	*Federal stock No.*
M36	4–20768–01	1440–620–9286

General

LAUNCHER, MONORAIL, GUIDED MISSILE: M36, w/e, is one of four Hercules monorail launchers and their associated equipment which are arranged in an in-line configuration. The monorail launcher M36 is of box-type, steel construction. The erecting beam is erected and lowered by means of a hydraulic system. The monorail functions as a firing platform for the NIKE-AJAX or NIKE-HERCULES missile. The launcher M36 serves as a test station for the missile positioned on it. The launcher M36 can be transported from one area to another by use of the launcher transport MODIFICATION KIT, GUIDED MISSILE LAUNCHER, FIELD MAINTENANCE: M93.*

Differences among models

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight	11,941 lb
Length	21 ft, 9 in.
Width	7 ft, 4 in.
Height	3 ft, 1 in.
Power requirement	3-phase, 120/208-volt, 400-cps
Power consumption (tot):	
One launcher operation	13.4 kw
Two launcher operation	26.8 kw
Power surge (max):	
One launcher operation	22.7 kw
Two launcher operation	36.0 kw

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1440–250–10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 monorail launcher per crate
Length	23 ft, 8 in.
Width	8 ft, 5 in.
Height	3 ft, 8½ in.
Volume	740 cu ft
Gross weight	14,900 lb
Ship tons	18.5

Outside Continental United States

Shipped	1 monorail launcher per crate
Length	23 ft, 8 in.
Width	8 ft, 5 in.
Height	3 ft, 8½ in.
Volume	740 cu ft
Gross weight	14,900 lb
Ship tons	18.5

References: SNL Y75–1, TM 9–1440–250–10, TM 9–1440–250–20P/1, TM 9–1440–250–35P/1, SB 9–199.

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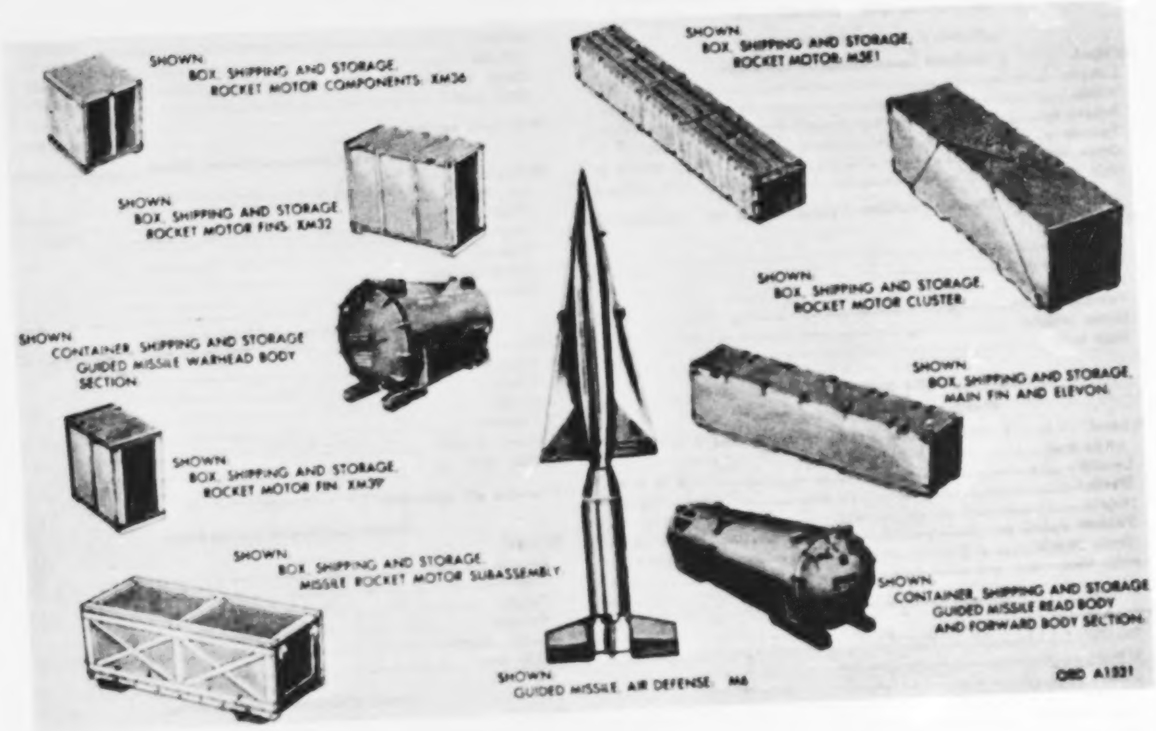
* Characteristics and data will be added at a later date.

GUIDED MISSILE. AIR DEFENSE: M6


SHOWN
BOX, SHIPPING AND STORAGE,
ROCKET MOTOR COMPONENTS: XM36
SHOWN
BOX, SHIPPING AND STORAGE,
ROCKET MOTOR: M5E1
SHOWN
BOX, SHIPPING AND STORAGE,
ROCKET MOTOR FINS: XM32
SHOWN
BOX, SHIPPING AND STORAGE,
ROCKET MOTOR CLUSTER
SHOWN
CONTAINER, SHIPPING AND STORAGE
GUIDED MISSILE WARHEAD BODY
SECTION
SHOWN
BOX, SHIPPING AND STORAGE,
MAIN FIN AND ELEVON
SHOWN
BOX, SHIPPING AND STORAGE,
ROCKET MOTOR FIN: XM39
SHOWN
BOX, SHIPPING AND STORAGE,
MISSILE ROCKET MOTOR SUBASSEMBLY
SHOWN
CONTAINER, SHIPPING AND STORAGE
GUIDED MISSILE READ BODY
AND FORWARD BODY SECTION
SHOWN
GUIDED MISSILE, AIR DEFENSE: M6

ORD A1321

Model	*Line item No.*	*Federal stock No.*
M6		

General

Differences among models: Classified.

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight of missile M6	10,675 lb
Length	41 ft, 6 in.
Diameter of missile body, less fins (approx)	2 ft, 7½ in.
Volume	277.5 cu ft
Weight of warhead M17 (T45)	1,106 lb
Width of rocket motor cluster, less fins	2 ft, 10½ in.
Height of rocket motor cluster, less fins	2 ft, 10½ in.

PERFORMANCE

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

SAFETY AND ARMING DEVICE, GUIDED MISSILE: M30A1, W/O BASE PLATE (FSN 1336-575-3457)

Within Continental United States

Shipped	1 wtrprf env/crdbd ctn, 20 ctn/wdn bx.
Length	1 ft, 3½ in.
Width	9¼ in.
Height	8 in.
Volume	0.64 cu ft
Gross weight	26.0 lb
Ship tons	0.016

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

WARHEAD ASSEMBLY, GUIDED MISSILE, HIGH EXPLOSIVE: (ORD NO. 5952022). Used on missile No. 10, 001-10, 205 inclusive. (FSN 1336-592-5199)

Within Continental United States

Shipped	1 warhead assembly/metal container
Length	8 ft, 3¼ in.
Width	4 ft, 6⅝ in.
Height	5 ft, 1½ in.
Volume	192.08 cu ft
Gross weight	3170.0 lb
Ship tons	4.8

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

STORAGE AND SHIPMENT DATA—Continued

WARHEAD ASSEMBLY, GUIDED MISSILE, HIGH EXPLOSIVE: (ORD NO. 5952021). Used on missile No. 10,206 and subsequent. (FSN 1336-677-0775)

Within Continental United States

Shipped 1 warhead assembly/metal container
Length .... 8 ft, 3½ in.
Width .... 4 ft, 6¼ in.
Height .... 5 ft, 1¹⁄₁₆ in.
Volume .... 192.08 cu ft
Gross weight .... 3170.0 lb
Ship tons 4.8

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

ROCKET MOTOR: M30 (FSN 1336-624-1794)

Within Continental United States

Shipped 1 rocket motor w/gas generator and 3 initiators/wdn bx.
Length .... 8 ft, 9 in.
Width .... 3 ft, 7¼ in.
Height .... 3 ft, 11¹⁄₁₆ in.
Volume .... 124.82 cu ft
Gross weight .... 3,844.0 lb
Ship tons 3.12

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

ROCKET MOTOR: M42 (XM42E2) W/4 IGNITER M24 (FSN 1336-646-7324)

Within Continental United States

Shipped 1 rocket motor/wdn crate
Length .... 15 ft
Width .... 3 ft, 7 in.
Height .... 4 ft, 6¼ in.
Volume .... 243.0 cu ft
Gross weight .... 6,520.0 lb
Ship tons 6.07

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ---- ....

ROCKET MOTOR: M5E1, W/IGNITER, W/O THRUST STRUCTURE, FIN SPAR BRACKETS, AND SHROUD (FSN 1336-546-2231)

Within Continental United States

Shipped 1 rocket motor w/igniter/wdn crate
Length .... 14 ft, 9 in.
Width .... 2 ft, 1¼ in.
Height .... 2 ft, 7½ in.
Volume .... 81.48 cu ft
Gross weight .... 1,883.0 lb
Ship tons 2.04

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Main body section:

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Fore and aft main fins:

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Jato cluster fins:

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Storage battery BB-401/U:

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

STORAGE AND SHIPMENT DATA—Continued

Storage battery BB-401/U—Continued

Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Ethylene oxide:

Within Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References: SM 9-5-1836, TM 9-1970-6.

LAUNCHING CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4, W/E

ORD A1522

Model	*Major item Line item No.*	*Federal stock No.*
AN/MSW-4	4-21910-01	1440-586-5024

General

LAUNCHING CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4, w/e, consists of LAUNCHING CONTROL GROUP, GUIDED MISSILE: OA-868/MSE-2 and TRAILER, LAUNCHING CONTROL STATION, GUIDED MISSILE: M262A1C. The launching control group AN/MSW-4 functions as a control center for the launching area.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	10,380 lb
Length	23 ft, 11 in.
Width	8 ft, 1 in.
Height	10 ft, 4 in.
Power requirements:	
Power requirements	3-phase, 120/208-volt, 400-cps
Total power consumption	1.84 kw
Maximum power surge	1.84 kw

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1440-250-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

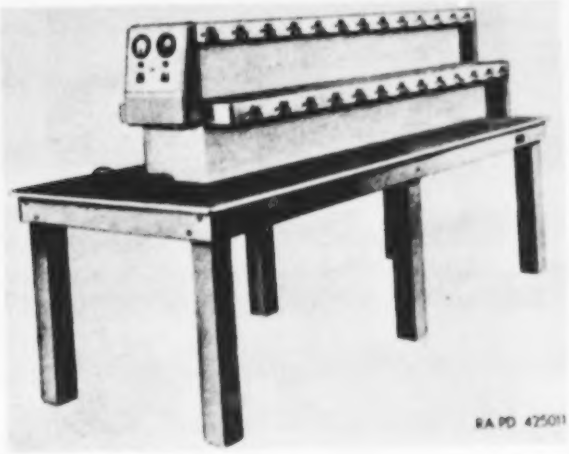
Shipped	
Length	20 ft, 7 in.
Width	8 ft, 1 in.
Height	10 ft, 4 in.
Volume	1719 cu ft
Gross weight	10,380 lb
Ship tons	42.1

Outside Continental United States

Shipped	
Length	20 ft, 7 in.
Width	8 ft, 1 in.
Height	10 ft, 4 in.
Volume	1719 cu ft
Gross weight	10,380 lb
Ship tons	42.1

References: SNL Y79, TM 9-1440-250-10, TM 9-1440-250-20P/2, TM 9-1440-250-35P/2, SB 9-199.

RACK, BATTERY: MT–1498/G, W/E



RA PD 475011

Model	*Secondary item Line item No.*	*Federal stock No.*
MT-1498/G	4-33565-	4935-568-8241

General

RACK, BATTERY: MT-1498/G, w/e, contains racks and outlets to connect missile storage batteries for charging when not installed in the missile.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	357 lb
Length	9 ft
Width	3 ft, 4 in.
Height	3 ft, 4 in.
Capacity (batteries)	5

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

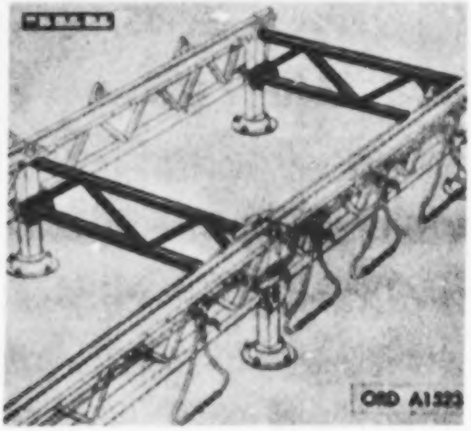
Shipped	1 battery rack per crate
Length	9 ft, 4½ in.
Width	3 ft, 8¾ in.
Height	3 ft, 1 in.
Volume	106.0 cu ft
Gross weight	700.0 lb
Ship tons	2.65

Outside Continental United States

Shipped	1 battery rack per crate
Length	9 ft, 4½ in.
Width	3 ft, 8¾ in.
Height	3 ft, 1 in.
Volume	160.0 cu ft
Gross weight	700.0 lb
Ship tons	2.65

References: SNL Y9, TM 9-1450-250-10, SM 9-5-4935.

RACK, LOADING, GUIDED MISSILE, SUPPORT ASSEMBLY LOADING RACK: M10, W/E



Model	*Major item Line item No.*	*Federal stock No.*
M10	4-33570-0	1440-587-3362

General

RACK, LOADING, GUIDED MISSILE, SUPPORT ASSEMBLY, LOADING RACK: M10, w/e, is used for joining side trusses.

Differences among models

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight	179½ lb
Length	7 ft, 8½ in.
Width	1 ft, 10½ in.
Height (adjustable):	
Minimum	2 ft, 4 in.
Maximum	3 ft, 4 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

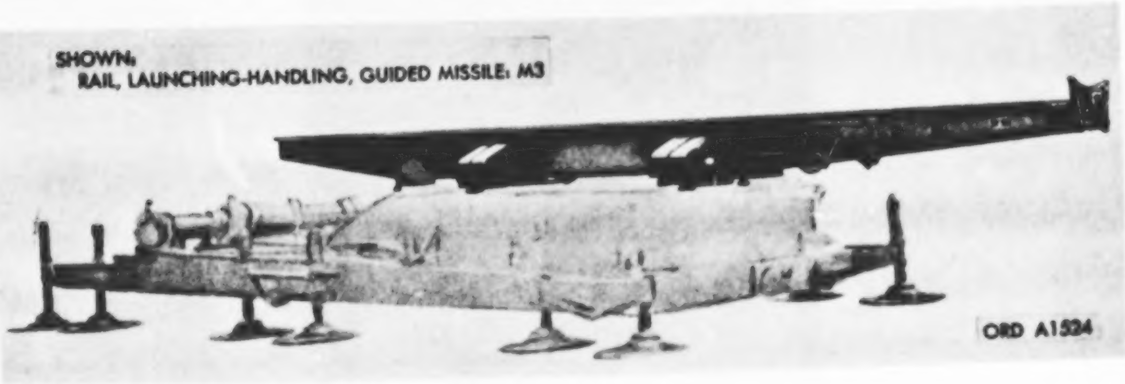
Shipped	
Length	8 ft, 1½ in.
Width	3 ft, 2¼ in.
Height	2 ft, 6 in.
Volume	65.0 cu ft
Gross weight	1230.0 lb
Ship tons	1.62

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1440-250-10, TM 9-1440-250-20P/1, TM 9-1440-250-35P/1.

RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: M2 AND M3, W/E


SHOWN:
RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: M3

ORD A1524

Model	*Major item Line item No.*	*Federal stock No.*
M3	4-33665-01	1450-629-2668
M2	4-33665-02	1450-593-9471

General

RAIL, LAUNCHING-HANDLING, GUIDED MISSILE: M2 and M3, w/e, is approximately 26½ feet long, 40 inches wide. The NIKE-HERCULES missile-booster are joined on the rail assembly. The launching-handling rail M3 is required for launching missile-booster combination.

Differences among models

Data plate location

Classification

M2	Standard A (OTCM 36833).
M3	

CHARACTERISTICS

Weight	2,892 lb
Length	26 ft, 9⅛ in.
Width	3 ft, 4 in.
Height	12 ft, 6 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

FSN 1450-629-2668

Within Continental United States

Shipped	
Length	27 ft, 5⅝ in.
Width	4 ft, 1⅝ in.
Height	2 ft, 4⅝ in.
Volume	273.0 cu ft
Gross weight	3802.0 lb
Ship tons	6.82

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 1450-593-9471

Within Continental United States

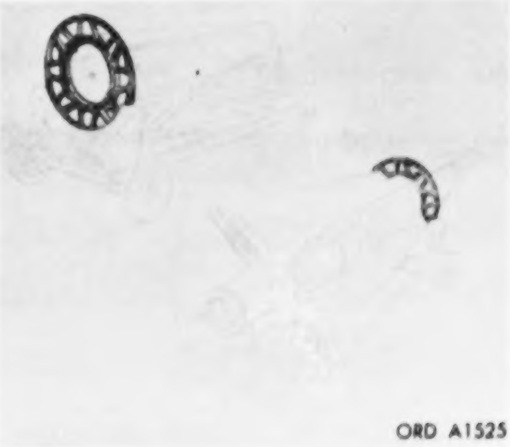
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1450-250-12.

RING, HANDLING, GUIDED MISSILE: (ORD NO. 8166435)



ORD A1525

	Secondary item	
Model	*Line item No.*	*Federal stock No.*
(ORD NO. 8166435)	4-17712-01	1450-602-7949

General

RING, HANDLING, GUIDED MISSILE: (ORD No. 8166435), consists of four handling ring segments. The handling ring supports the forward end of rear body section on the rear frame assembly of the **HERCULES** missile body truck and permits rotation of the rear body section. The handling ring segments are also used as a forward lift point for the **HERCULES** missile body hoist beam and as a support for the missile body or rear body section on the missile body or rocket motor cluster.

Differences among models

Data plate location

Classification: Standard A.

CHARACTERISTICS

Segment:

Weight	20¾ lb
Length	3 ft, 1 in.
Width	1 ft, ⅛ in.
Height	4¾ in.
Capacity	2,000 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 segment per box (4 segments per ring)

Length	3 ft, 4⅝ in.
Width	1 ft, 1½ in.
Height	5⅞ in.
Volume	1.88 cu ft
Gross weight	52[illegible] lb
Ship tons	[illegible]7

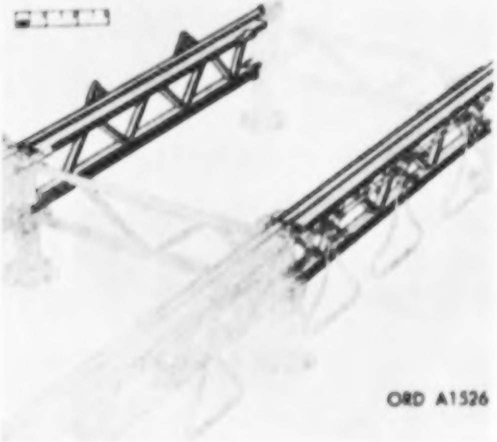
Outside Continental United States

Shipped 1 segment per box (4 segments per ring)

Length	3 ft, 4⅝ in.
Width	1 ft, 1½ in.
Height	5⅞ in.
Volume	1.88 cu ft
Gross weight	52.0 lb
Ship tons	0.47

References: TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/2, TM 9-1450-250-35P/2, SB 9-199.

SIDE TRUSS, LOADING RACK, GUIDED MISSILE, LAUNCHER, TRACK ASSEMBLY, LOADING RACK: M1


ORD A1526

Model	*Major item* *Line item No.*	*Federal stock No.*
M1	4-40825-01	1440-587-3361

General

SIDE TRUSS, LOADING RACK, GUIDED MISSILE, LAUNCHER, TRACK ASSEMBLY, LOADING RACK: M1, is one of two side sections of RACK, LOADING, GUIDED MISSILE, SUPPORT ASSEMBLY, LOADING RACK: M10.* T-section rails are welded to the top and extend the length of the launcher loader which is used for storing, testing, and handling missiles.

Differences among models

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight	823 lb
Length	10 ft, 3 in.
Width	1 ft, 8⅛ in.
Height (adjustable):	
Minimum	2 ft, 4 in.
Maximum	3 ft, 4 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

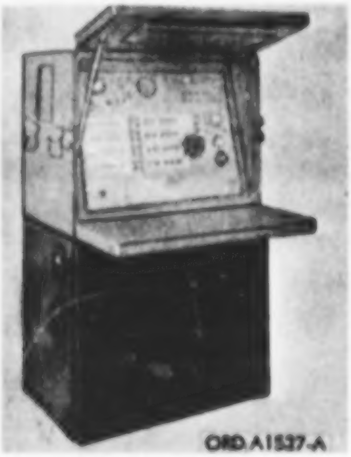
Shipped	
Length	11 ft, 1 in.
Width	2 ft, 7 in.
Height	2 ft, 4 in.
Volume	66.50 cu ft
Gross weight	1700.0 lb
Ship tons	1.66

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1440-250-10, TM 9-1440-250-20P/2, TM 9-1440-250-35P/2.

SIMULATOR GROUP: OA-2060/MSW-4, W/E (SIMULATOR GROUP: OA-2010/MSW-4 AND SIMULATOR GROUP: OA-2060/MSW-4)



Model	*Major item Line item No.*	*Federal stock No.*
OA-2010/MSW-4	4-41059-0	4935-586-5007
OA-2060/MSW-4	9-45760 (Temp.)	4935-715-6095

General

SIMULATOR GROUP: OA-2060/MSW-4, w/e (SIMULATOR GROUP: OA-2010/MSW-4 AND SIMULATOR GROUP: OA-2060/MSW-4) serves as a base for section launcher control indicator and provides power requirements for launching section.

Differences among models

Data plate location

Classification

OA-2010/MSW-4	Standard A (OTCM 37119).
OA-2060/MSW-4	

CHARACTERISTICS

Weight	237 lb
Length	3 ft
Width	2 ft, 1½ in.
Height	2 ft, 8⅝ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1440-250-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

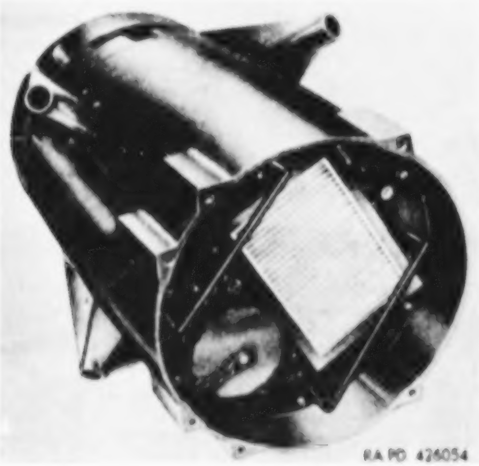
Shipped	1 unit per box
Length	3 ft, 8⅝ in.
Width	2 ft, 10⅝ in.
Height	3 ft, 1⅝ in.
Volume	33.0 cu ft
Gross weight	367 lb
Ship tons	0.82

Outside Continental United States

Shipped	1 unit per box
Length	3 ft, 8⅝ in.
Width	2 ft, 10⅝ in.
Height	3 ft, 1⅝ in.
Volume	33.0 cu ft
Gross weight	367 lb
Ship tons	0.82

References: TM 9-1440-250-10, TM 9-1440-250-20P/4, TM 9-1440-250-35P/4, SB 9-199.

SIMULATOR, GUIDED MISSILE, FLIGHT: OA-1643/M


RA PD 426054

Model	*Major item Line item No.*	*Federal stock No.*
OA-1643/M	4-41050-0	4935-621-5182
OA-1643B/M		4935-724-3296

General

SIMULATOR, GUIDED MISSILE, FLIGHT: OA-1643/M, is hoisted during operation to the top of a 30-foot mast attached to the LAUNCHER CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4 (p. 19-106) and is used for periodic checks of the missile tracking radar system. The flight simulator OA-1643/M consists of a slightly tapered, two-section cylindrical housing, a simulator test set mounted inside the housing, and four identical antennas mounted 90° apart around the upper end of the housing.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	
Length	
Width	
Height	

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

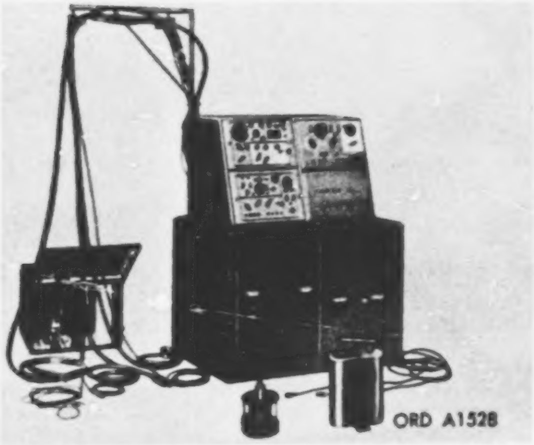
Shipped	1 simulator per box
Length	3 ft, 4 in.
Width	3 ft
Height	3 ft, 1 in.
Volume	31 cu ft
Gross weight	214 lb
Ship tons	0.77

Outside Continental United States

Shipped	1 simulator per box
Length	3 ft, 4 in.
Width	3 ft
Height	3 ft, 1 in.
Volume	31 cu ft
Gross weight	214 lb
Ship tons	0.77

References: SB 9-199, TM 9-1410-250-12/1, TM 9-1410-250-20P/2.

TEST SET, GUIDED MISSILE: (ORD NO. 9025326)



ORD A1528

Model	*Line item No.*	*Federal stock No.*
(ORD NO. 9025326)		4935-664-3624

General

TEST SET, GUIDED MISSILE: (ORD NO. 9025326), is used to perform checkout tests during the assembly of the NIKE-HERCULES guided missile M6. It consists of a missile electrical test set and a missile RF test set group.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Missile electrical test set:	
Missile electrical test set group (ORD NO. 9034602):	
Weight	180 lb
Length	1 ft, 10 in.
Width:	
Top	1 ft, 6 in.
Bottom	2 ft, 1 in.
Height	2 ft, 4 in.
Missile electrical test set case assembly (ORD NO. 8529360):	
Weight	133 lb
Length	2 ft, 6 in.
Width	2 ft
Height	3 ft, 1½ in.
Missile RF test set group:	
Missile RF test set case (ORD NO. 9004470):	
Weight	104 lb
Length	2 ft, 6 in.
Width	2 ft
Height	3 ft, 1½ in.
Missile RF test set group (ORD NO. 9005056):	
Weight	150 lb
Length	1 ft, 10 in.
Width:	
Top	1 ft, 6 in.
Bottom	2 ft, 1 in.
Height	2 ft, 3 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Missile electrical test set:

Shipped 1 electrical test set group and 1 electrical test set case assembly per crate 1 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Shipped 1 test set accessory group per crate 2 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Missile RF test set group:

Shipped 1 RF test case, 1 test set group, and 1 test set accessory group per crate 1 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Shipped 1 test adapter per crate 2 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Outside Continental United States

Missile electrical test set:

Shipped 1 electrical test set group and 1 electrical test set case assembly per crate 1 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Shipped 1 test set accessory group per crate 2 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Missile RF test set group:

Shipped 1 RF test set case, 1 test set group, and 1 test set accessory group per crate 1 of 2

Length

Width

Height

Volume

Gross weight

Ship tons

Shipped 1 test adapter per crate 2 of 2

Length

Width

Height

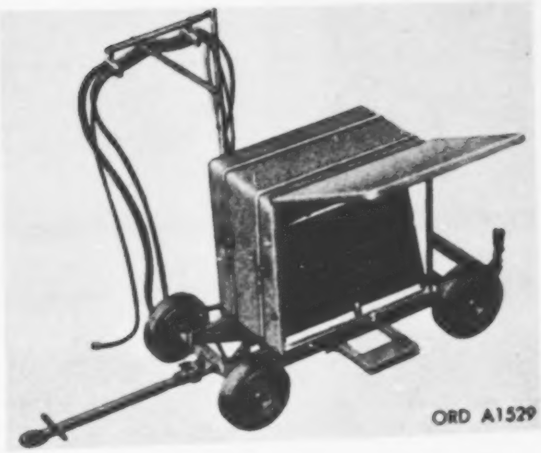
Volume

Gross weight

Ship tons

References: TM 9-4935-253-12, TM 9-4935-253-20P/1, TM 9-4935-253-35P/1, TM 9-1450-250-10.

TEST SET, GUIDED MISSILE: AN/DSM-33, W/E



ORD A1529

Model	*Secondary item Line item No.*	*Federal stock No.*
AN/DSM-33	4-50489-02	4935-630-9721
AN/DSM-33	4-50489-04	4935-664-3622

General

TEST SET, GUIDED MISSILE: AN/DSM-33, w/e, is used to perform operational checks on the guidance set of the missile M6 and on the SIMULATOR, GUIDED MISSILE, FLIGHT: OA-1643/M (p. 19-113) which is attached to the mast on the LAUNCHER CONTROL GROUP, GUIDED MISSILE, TRAILER MOUNTED: AN/MSW-4 (p. 19-111).

Differences among models

Data plate location

Classification

AN/DSM-33 (FSN 4935-630-9721)	Standard A (OTCM 37119)
AN/DSM-33 (FSN 4935-664-3622)	

CHARACTERISTICS

Weight	
Length	
Width	
Height	

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

FSN 4935-630-9721

Box No. 1

Shipped	4 ft, 8½ in.
Length	3 ft, 5 in.
Width	4 ft, ¾ in.
Height	65.88 cu ft
Volume	674 lb
Gross weight	1.63
Ship tons	

Box No. 2

Shipped	2 ft, 11 in.
Length	2 ft, 4 in.
Width	2 ft 1 in.
Height	14.25 cu ft
Volume	14.25 lb
Gross weight	0.36
Ship tons	

FSN 4935-664-3622

Box No. 1

Shipped	2 ft, 11 in.
Length	2 ft, 4 in.
Width	2 ft, 1 in.
Height	14.25 cu ft
Volume	181.0 lb
Gross weight	0.36
Ship tons	

Box No. 2

Shipped	4 ft, 11 in.
Length	3 ft, 6½ in.
Width	4 ft, 3¼ in.
Height	73.23 cu ft
Volume	874.0 lb
Gross weight	1.82
Ship tons	

Outside Continental United States

FSN 4935-630-9721

Box No. 1

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box No. 2

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

FSN 4935-664-3622

Box No. 1

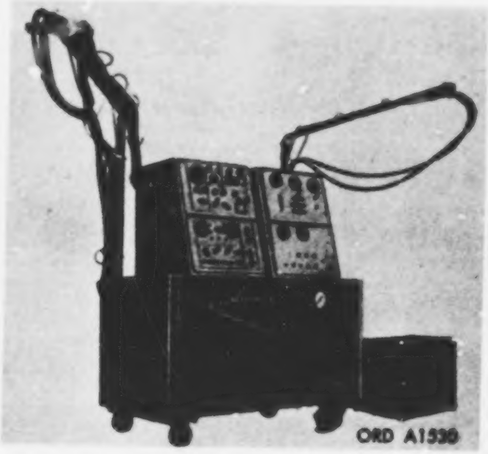
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Box No. 2

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-4935-26[illegible]-12, SB 9-199, SM 9-5-4935, SNL Y165.

TEST STAND HYDRAULIC SYSTEM COMPONENTS: (ORD NO. 8027962), W/E



Model	*Secondary item Line item No.*	*Federal stock No.*
(ORD NO. 8027962)	4–51060–06	4935–568–8254

General

TEST STAND, HYDRAULIC SYSTEM COMPONENTS: (ORD No. 8027962), w/e, consists of hydraulic test stand M14 (ORD No. 8001840) and equipment. The test stand, in conjunction with the assembly area oil fill valve assembly, is used to fill and bleed the accessory power supply of the NIKE-HERCULES missile body. The test stand is equipped with an electrical cable boom and a hydraulic hose boom.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	649 lb
Length	5 ft, 1 in.
Width	2 ft, 9 in.
Height (without booms)	3 ft 11⅛ in.
Capacity	55 gal

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y20.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

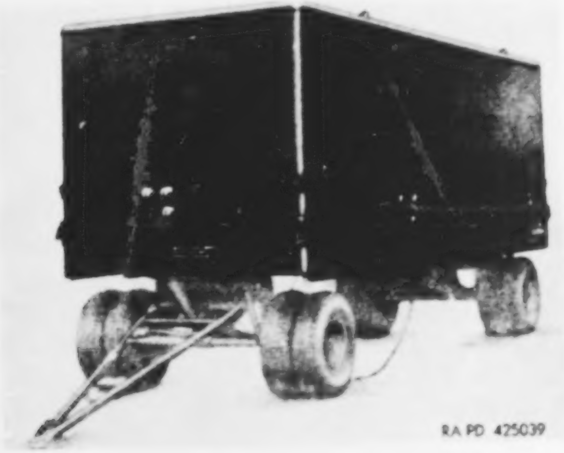
Shipped	1 test stand per crate
Length	5 ft, 11 in.
Width	3 ft, 1¼ in.
Height	3 ft, 11⅛ in.
Volume	71.45 cu ft
Gross weight	1,448.0 lb
Ship tons	1.785

Outside Continental United States

Shipped	
Length	5 ft, 11 in.
Width	3 ft, 1¼ in.
Height	3 ft, 11⅛ in.
Volume	71.45 cu ft
Gross weight	1,448.0 lb
Ship tons	1.785

References: SNL Y20, TM 9–1450–250–10.

TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-5, W/E



Model	*Line item No.*	*Federal stock No.*
AN/MPA-5	4-56845-01	1430-586-4993

General

TRACKING STATION, GUIDED MISSILE, TRAILER MOUNTED: AN/MPA-5, w/e, consists of TRACKING STATION GROUP, GUIDED MISSILE: OA-1595/MPA-5; TRAILER, GUIDED MISSILE, TRACKING STATION: M428; DOLLY, TRAILER, FRONT: M429A1D; and DOLLY, TRAILER, FRONT: M430A1D. The tracking station AN/MPA-5 provides housing for missile-tracking radar equipment and target-tracking radar equipment.

Differences among models

Classification: Standard A (OTCM 37119).

Data plate location

CHARACTERISTICS

Weight	
Length	
Width	
Height	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1430-250-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

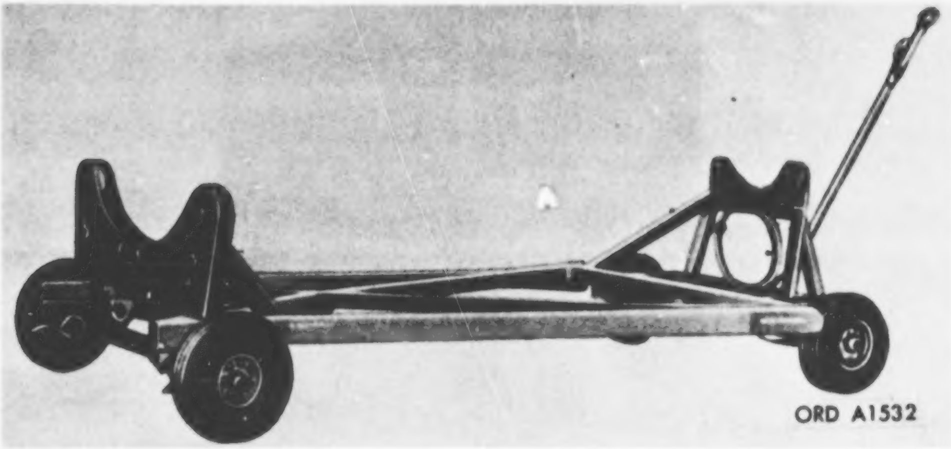
Shipped	1 mounted trailer with reels and cables
Length	21 ft, 5 in.
Width	7 ft, 11 in.
Height	10 ft, 8 in.
Volume	1801.0 cu ft
Gross weight	12,850.0 lb
Ship tons	45

Outside Continental United States

Shipped	1 mounted trailer with reels and cables
Length	21 ft, 5 in.
Width	7 ft, 11 in.
Height	10 ft, 8 in.
Volume	1801.0 cu ft
Gross weight	12,850.0 lb
Ship tons	45

References: SNL Y39, TM 9-1430-250-10, TM 9-1430-250-30P/5, TM 9-1430-250-35P/5, SB 9-199.

TRUCK, GUIDED MISSILE BODY SECTION: M473, W/E



ORD A1532

Model	*Line item No.*	*Federal stock No.*
M473	4-60954-02	1450-609-4079

General

TRUCK, GUIDED MISSILE BODY SECTION: M473, w/e, is used to transport a rear body section or a missile body. The truck M473 is equipped with a rotary ring to support the rear end of the missile body or the rear end of a rear body section.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	1,832 lb
Length	16 ft, 4 in.
Width	7 ft, 1 in.
Height	4 ft, 5 in.
Capacity	6,000 lb
Grade angle (max)	16° (28 percent)

PERFORMANCE

Speed, towing, max (10 deg bank curve)	10 mph

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

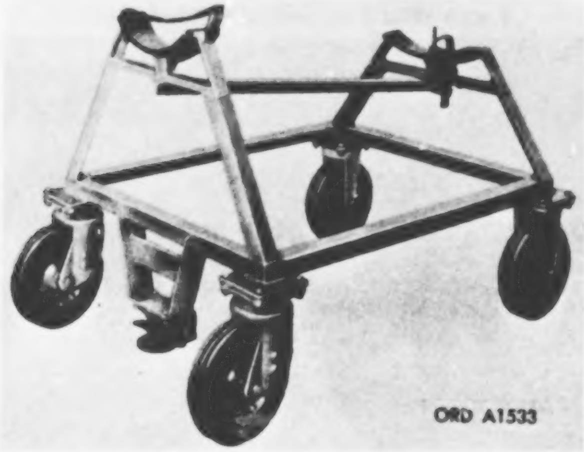
Shipped	
Length	13 ft, 2⅞ in.
Width	4 ft, 2⅛ in.
Height	3 ft, 7⅛ in.
Volume	200 cu ft
Gross weight	2205.0 lb
Ship tons	5

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/3, TM 9-1450-250-35P/2.

TRUCK, GUIDED MISSILE, NOSE SECTION: M489, W/E



Model	*Major item* *Line item No.*	*Federal stock No.*
M489	4-60958-01	1450-604-0694

General

TRUCK, GUIDED MISSILE, NOSE SECTION: M489, w/e, is used for storage of missile nose section. It consists of four caster wheels, angle iron frame, two supporting ring segments, and a floor brake.

Differences among models

Data plate location

The identification plate is located on the left-rear side of the framework.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight	196 lb
Length	4 ft, 8 in.
Width	3 ft, 1 in.
Height	3 ft, 3 in.
Capacity	500 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

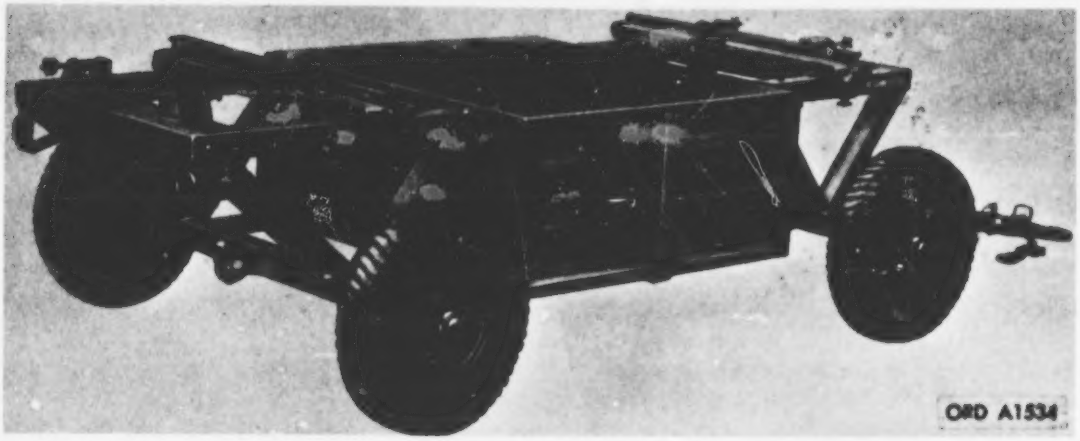
Shipped	
Length	5 ft, 2 in.
Width	3 ft, 5¾ in.
Height	3 ft, 6⅛ in.
Volume	63.9 cu ft
Gross weight	414.0 lb
Ship tons	1.6

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/2, TM 9-1450-250-35P/2, SB 9-199.

TRUCK, GUIDED MISSILE, ROCKET MOTOR: M442, W/E



Model	*Major item Line item No.*	*Federal stock No.*
M442	4-60956-0	1450-586-5011

General

TRUCK, GUIDED MISSILE, ROCKET MOTOR: M442, w/e, is used to transport a rocket motor cluster. The truck M442 may also be used to transport a launching-handling rail, a missile body, or a rocket motor cluster transporter adapter. Fin storage rack assemblies, inside the truck, are used to store the rocket motor cluster fin assemblies. The rear wheels of the truck are equipped with parking brakes. A tow bar permits the truck to be towed.

Differences among models

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight	1,165 lb
Length	10 ft, 8 in.
Width	5 ft, 8 in.
Height	3 ft
Capacity	5,500 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-250-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	12 ft, 9⅝ in.
Width	6 ft, 3 in.
Height	3 ft, 2⅝ in.
Volume	263 cu ft
Gross weight	2190 lb
Ship tons	6.575

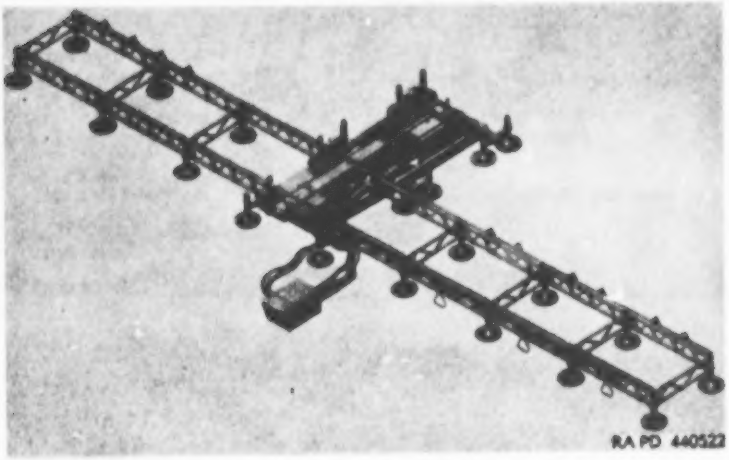
Outside Continental United States

Shipped	
Length	12 ft, 9⅝ in.
Width	6 ft, 3 in.
Height	3 ft, 2⅝ in.
Volume	263 cu ft
Gross weight	2190 lb
Ship tons	6.575

References: TM 9-1450-250-12, TM 9-1450-250-10, TM 9-1450-250-20P/2, TM 9-1450-250-35P/2.

MODIFICATION KIT, GUIDED MISSILE LAUNCHER, FIELD INSTALLATION: M94, W/E

(Data to be published at a later date.)



RA PD 440522

Model	*Major item Line item No.*	*Federal stock No.*
M94	4-28416-	1440-420-9288

General

Differences among models

Data plate location

Classification: Standard A (OTCM 36833).

CHARACTERISTICS

Weight	
Length	
Width	
Height	

PERFORMANCE

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	1 kit per 12 boxes
Length	
Width	
Height	
Volume	131.42 cu ft
Gross weight	6,000.0 lb
Ship tons	3.28

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y026, SNL Y75-6, SB 9-122.

MODIFICATION KIT, GUIDED MISSILE LAUNCHER, FIELD INSTALLATION: M197

(Data to be published at a later date.)

Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight ....
Length ....
Width ....
Height ....

PERFORMANCE

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

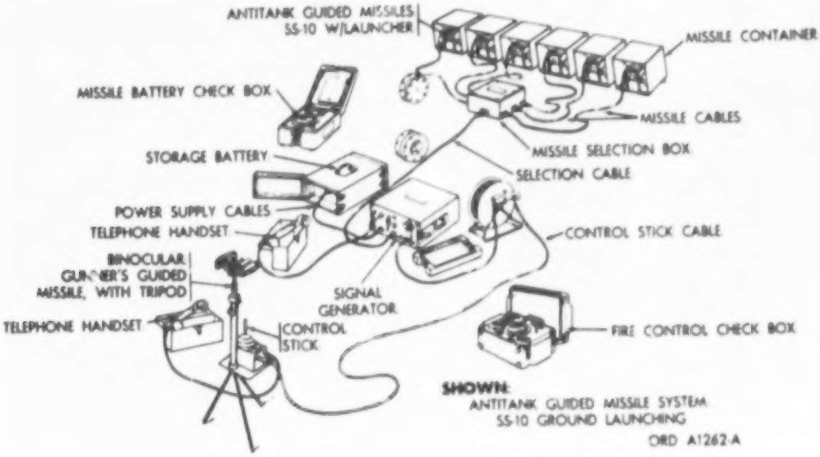
Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References:

ANTITANK GUIDED MISSILE SYSTEM: SS-10

(Includes missile, missile ground guidance, control handling, and testing equipment)


ANTITANK GUIDED MISSILES SS-10 W/LAUNCHER
MISSILE CONTAINER
MISSILE BATTERY CHECK BOX
MISSILE CABLES
STORAGE BATTERY
MISSILE SELECTION BOX
SELECTION CABLE
POWER SUPPLY CABLES
TELEPHONE HANDSET
CONTROL STICK CABLE
BINOCULAR GUNNER'S GUIDED MISSILE, WITH TRIPOD
SIGNAL GENERATOR
TELEPHONE HANDSET
CONTROL STICK
FIRE CONTROL CHECK BOX

SHOWN:
ANTITANK GUIDED MISSILE SYSTEM
SS-10 GROUND LAUNCHING

ORD A1262-A

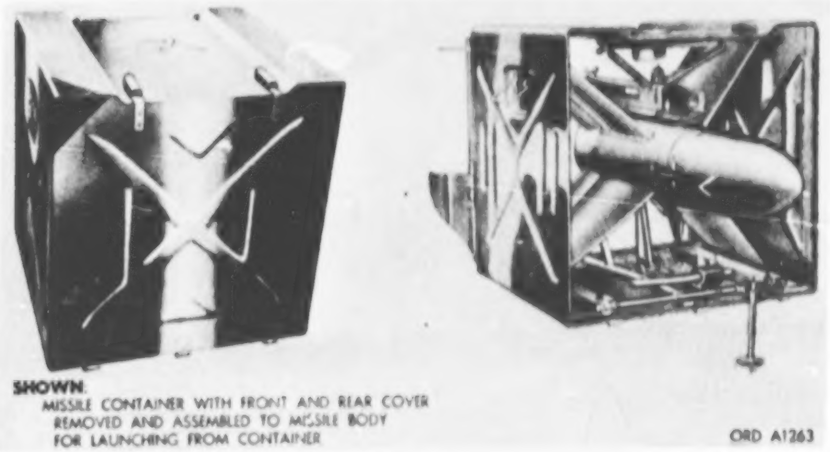
Model	*Line item No.*	*Federal stock No.*
SS-10, ground mounted, w/e		RSA-10021918
SS-10, truck mounted, w/e		RSA-10021908

General

ANTITANK GUIDED MISSILE SYSTEM: SS-10 is intended for use against ground targets. The system may be ground emplaced or adapted for either tank, truck, or light aircraft launching.

	Page
ANTITANK GUIDED MISSILE: SS-10 w/launcher	19-124
BATTERY, STORAGE	19-125
BINOCULAR: Gunner's, Guided Missile, with Tripod (for characteristics and data, see item in section 27)	
CABLE GROUP AND REELS:	19-126
CONTROL STICK: Type A	19-127
FIRE CONTROL CHECK BOX:	19-128
MISSILE BATTERY CHECK BOX:	19-129
MISSILE CONTAINER:	19-130
MISSILE SELECTION BOX:	19-131
SIGNAL GENERATOR: T4F	19-132
TELEPHONE HANDSET:	19-133

ANTITANK GUIDED MISSILE: SS-10, W/LAUNCHER



SHOWN:
MISSILE CONTAINER WITH FRONT AND REAR COVER REMOVED AND ASSEMBLED TO MISSILE BODY FOR LAUNCHING FROM CONTAINER

ORD A1263

Model	*Line item No.*	*Federal stock No.*
SS-10		
(As above) w/launcher and high explosive warhead		RSA-10021708
(As above) w/launcher and high explosive and antpiersonnel warhead		RSA-20032709
(As above) w/launcher and combined tear gas antipersonnel warhead		
(As above) w/launcher and inert warhead		

General

ANTITANK GUIDED MISSILE: SS-10, includes the finned missile body, two on-board missile batteries, and the warhead. The missile is packaged with the launcher and shipped in missile container. The missile may be ground launched or launched from a vehicle. For ground launching, the missile can be launched from the launcher while the launcher is still in the container or the missile and launcher may be removed from the container before launching. Four interchangeable warheads are provided; a shaped charge for use against armored targets; a combined shaped and antipersonnel charge; a combined tear gas and antipersonnel charge, and an inert or practice warhead. A flare is attached to the missile for increased visibility.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Weight:	
W/high explosive warhead	33 lb
W/high explosive antipersonnel warhead	
W/combined tear gas antipersonnel warhead	
W/inert warhead	
Length	33.86 in.
Body diameter	6.40 in.
Span	29.52 in.
Batteries	2
Flare:	
Type	pyrotechnic
No. used	1

PERFORMANCE

Maximum effective range	1,600 meters
Minimum effective range	450 meters
Speed	262/fps
Initial acceleration	13 g.
Normal maximum acceleration	1.5 g
Propelled flight time	22 seconds

EQUIPMENT

Basic Issue Items: See TM 9-1400-450-12.

INSTRUCTIONAL MATERIAL

SIMULATOR: S-55*

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

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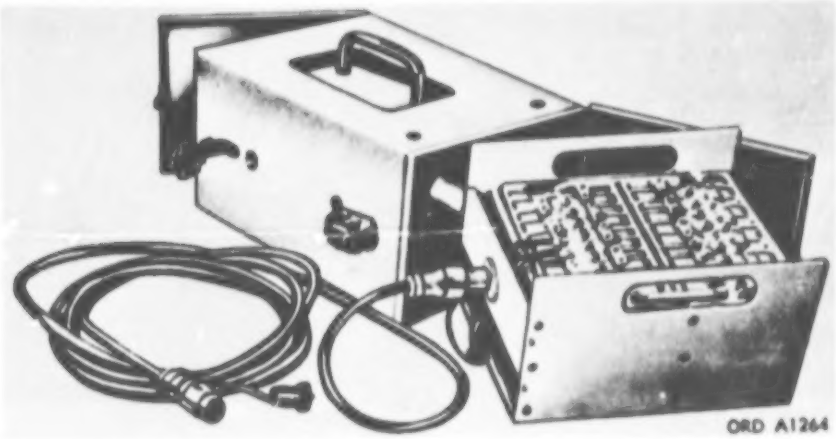
*Characteristics and data will be added at a later date.

BATTERY, STORAGE: (22 CELLS, 26 VOLTS, 9 AMP HOURS CAP. AT 2-HOUR RATE)



Model *Line item No.* *Federal stock No.*

General

BATTERY, STORAGE: (22 cells, 26 volts, 9 amp hours cap. at 2-hour rate) furnishes the field power supply to the generator for the missile ground system. Vehicle-mounted systems use the vehicle battery.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Type	nickel-cadmium
Weight	34 lb
Height	6.45 in.
Width	8.5 in.
Length	13.26 in.
Recharging	Indefinite

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

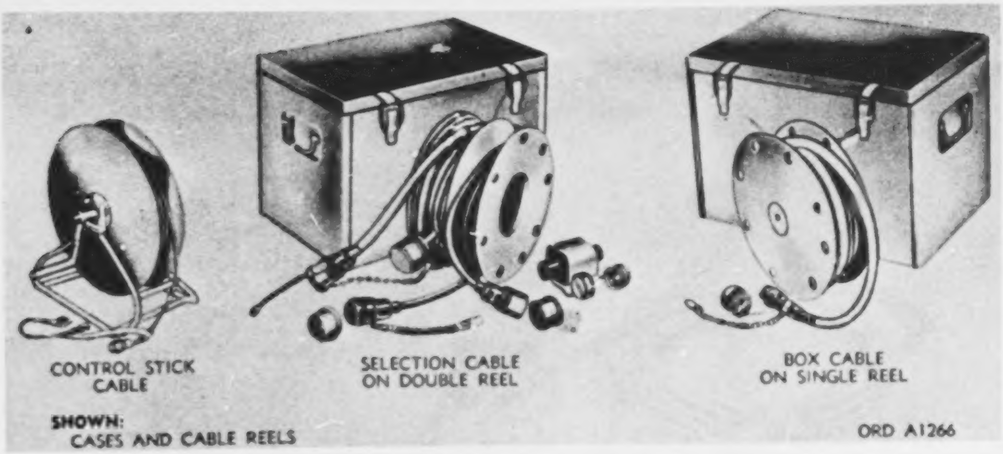
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-50, TM 9-1400-450-35P.

CABLE GROUP AND REELS:



SHOWN:
CASES AND CABLE REELS

ORD A1266

Model	*Line item No.*	*Federal stock No.*
Ground launching cable		
Control stick		
Selection		
Missile		
Power supply		
Vehicle launching cable		
Control		RSA-10021333
Selector		RSA-10021332
Missile		RSA-10021334
Power supply		RSA-10021331

General

CABLE GROUP AND REELS: are electrical connecting cables of different lengths provided to interconnect the operating equipment. The cables are fitted with connections and are equipped with safety protector caps. Each cable required for ground launching is wound on a light metal reel to facilitate orderly packing and shipping. Cases for storing and shipping the wound reels are provided. The cables required for vehicle launching are attached to clips and dummy connectors during travel.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Ground launching:
Control stick cable (connects control stick with generator):
Type -- 7-conductor
Length -- 330 ft
Selection cable (connector generator with selection box):
Type -- 12-conductor
Length -- 50 ft
Missile cable (connects selection box with missile, 5 issued (2 spares)):
Type -- 7-conductor
Length -- 50 ft
Power supply cable (connects power supply to the generator):
Type -- 2-conductor
Length -- 18 ft
Vehicle launching:
Vehicle control cable (RSA-10021333) (connects control stick to the generator):
Type -- 7-conductor
Length -- 6.5 ft
Selector cable (RSA-10021332) (connects selection box to generator):
Type -- 12-conductor
Length -- 5 ft
Missile cable (RSA-10021334) (connects selection box to the missiles (3 required)):
Type -- 7-conductor
Length -- 6 ft
Vehicle power supply cable (RSA-10021331) (connects vehicle battery to the generator):
Type -- 2 conductor
Length -- 6.5 ft
Crate, cable reel empty:
Weight -- 16.50 lb
Height -- 18 in.
Width -- 11.50 in.
Length -- 18.50 in.
Reel, cable w/control stick cable:
Weight -- 46.30 lb
Height -- 18.89 in.
Width -- 6.29 in.
Reel, cable, double, w/cables:
Weight -- 15.40 lb
Height -- 11.02 in.
Width -- 5.63 in.
Reel, cable, single, w/cable:
Weight -- 9.25 lb
Height -- 11.02 in.
Width -- 3.38 in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

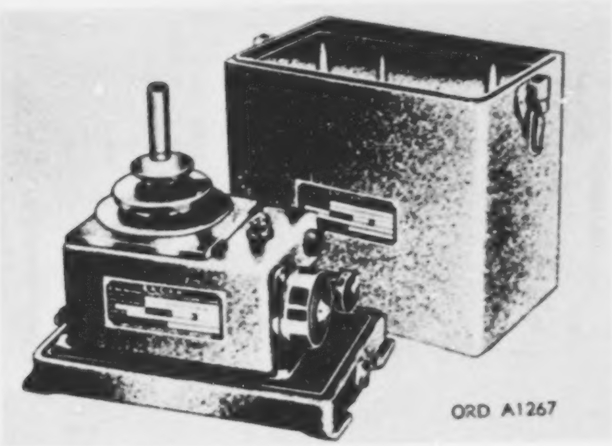
Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

CONTROL STICK: TYPE A



Model	*Line item No.*	*Federal stock No.*
Type A	----------	RSA-10021227

General

CONTROL STICK: type A, connected to the generator, is designed to be manipulated to control command voltages that are transmitted to the missile by the generator. The control stick may be moved freely backward or forward, left or right, and is returned automatically to the neutral dead-center position by a spring. For ease when carrying, the control stick assembly is inclosed in a light metal case with detachable cover.

Differences among models

Data plate location

Identification plate located on cover. Data plate located on control stick housing.

Classification:

CHARACTERISTICS

Weight	7.05 lb
Height	9.64 in.
Width	6.06 in.
Length	10.11 in.
Contains:	
Telephone magneto	power for telephone bell
Micro-socket	for telephone plug-in
7-pin plug	for cable connection to generator
Signal lamp	neon
Potentiometers (2)	one for yaw one for pitch
Resistors (2)	variable w/two adjustment

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

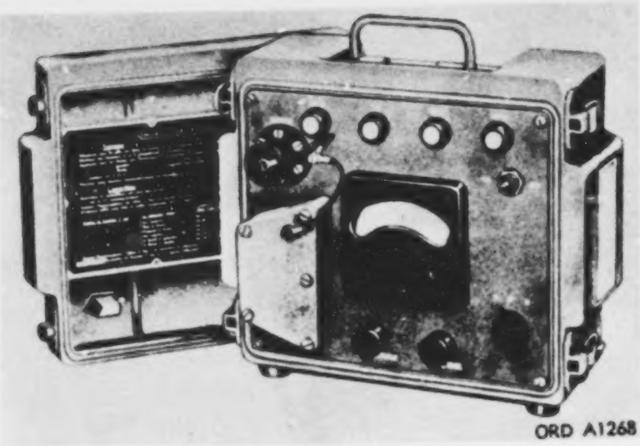
Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

best copy available

FIRE CONTROL CHECK BOX:



ORD A1268

Model	*Line item No.*	*Federal stock No.*
Battery relay model or Transistorized circuit model.		RSA–10021715

General

FIRE CONTROL CHECK BOX: is used to check the ground equipment, by simulating, to insure that the system is working properly, that the ignition sequence is correct and that there is continuity in the corresponding circuits up to their respective terminals on the missile cable.

Differences among models

Battery Relay model is operated by two 1.5-volt dry-cell batteries. Transistorized circuit model is operated by one of the missile batteries.

Date plate location

Instruction plate on inside of cover.

Classification:

CHARACTERISTICS

Weight	14.97 lb
Height	6 in.
Width	11.25 in.
Length	9.5 in.
Circuitry:	
1	ignition sequence
2	missile line
3	yaw and pitch relays
4	missile spoiler currents
Use	circuit tester

PERFORMANCE

Ignition sequence:

Signal lamp (MFG)	IG=Ignition of gyro
Signal lamp (DG)	UG=Uncaging of gyro
Signal lamp (MFT)	IF=Ignition of flare
Signal lamp (MFP)	IB=Ignition of booster

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

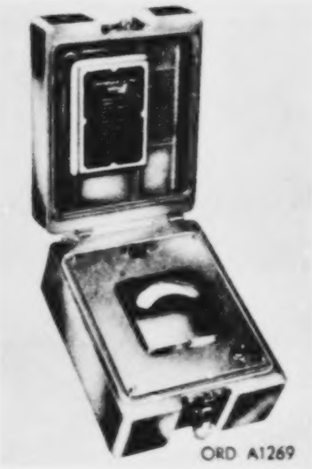
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9–1400–450–12, TM 9–1400–450–20, TM 9–1400–450–30, TM 9–1400–450–35P.

MISSILE BATTERY CHECK BOX:


ORD A1269

Model	*Line item No.*	*Federal stock No.*
		RSA-10021713

General

MISSILE BATTERY CHECK BOX: is essentially a voltmeter and a resistance coil so constructed that the resistance load can be switched into the circuitry. This places a load on the battery with a corresponding drop in voltage. The missile battery check box is used to check the missile batteries before placing them in the missile.

Differences among models

Data plate location

Data plate is located on inside of cover.

Classification:

CHARACTERISTICS

Weight	9.47 lb
Height	5.11 in.
Width	7.75 in.
Length	10.03 in.
Resistor	56-ohm
Switch	3-position toggle
Use	missile battery tester

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

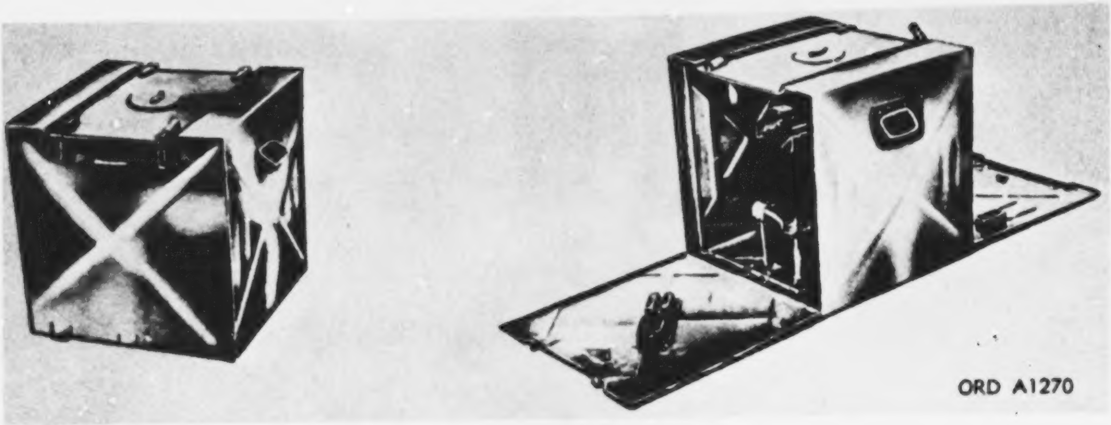
Shipped
- Length --
- Width --
- Height --
- Volume --
- Gross weight ----------------------------------
- Ship tons -------------------------------------

Outside Continental United States

Shipped
- Length --
- Width --
- Height --
- Volume --
- Gross weight ----------------------------------
- Ship tons -------------------------------------

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

MISSILE CONTAINER:


ORD A1270

Model *Line item No.* *Federal stock No.*

General

MISSILE CONTAINER: is used for transporting the missile, the missile launcher, and two on-board dry-cell missile batteries. For ground launching, the missile can be launched without removing the missile or the launcher from the container. The monopad on the container provides means for elevating the missile to the desired launching angle. For vehicle launching, the missile and the launcher are removed from the container and installed in the vehicle missile supports.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight, empty	55 lb
Weight, w/launcher	68.6 lb
Weight, w/launcher and missile (high-explosive warhead)	103.61 lb
Weight, w/launcher and missile (antipersonnel warhead)	
Weight, w/launcher and missile (combined tear-gas and antipersonnel warhead)	
Weight, w/launcher and missile (inert warhead)	
Material	Ribbed sheet steel
Waterproofed	rubber gaskets at openings
Monopad tube assembly and monopad	To obtain correct elevation when missile is launched from container.
Two posts with anchoring spades	To secure container to ground during launching operations.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

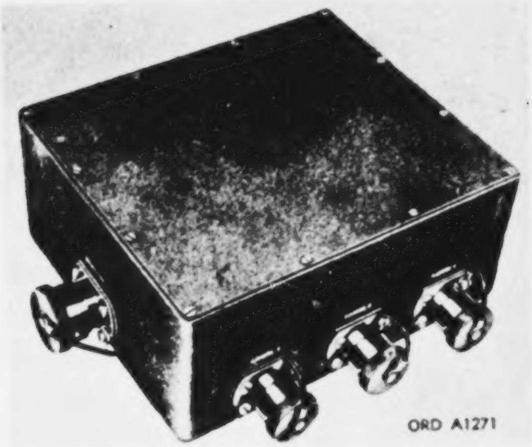
Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

MISSILE SELECTION BOX:


ORD A1271

Model	*Line item No.*	*Federal stock No.*
		RSA-10021226

General

MISSILE SELECTION BOX: governs the simultaneous connection and separate launching of one of the six missiles in the battery. Selection of the missile to be fired is done by positioning the selector switch to the number of the missile desired. When the firing button is pressed, the system energizes the relays in the selection box so that voltage and signals will be sent to only one missile. The missile selection box is connected to the missiles.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	10.46 lb
Height	3.89 in.
Width	7.99 in.
Length	9.30 in.
Connection to generator	12-pin plug
Connection to corresponding missile cable	7-pin plug

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

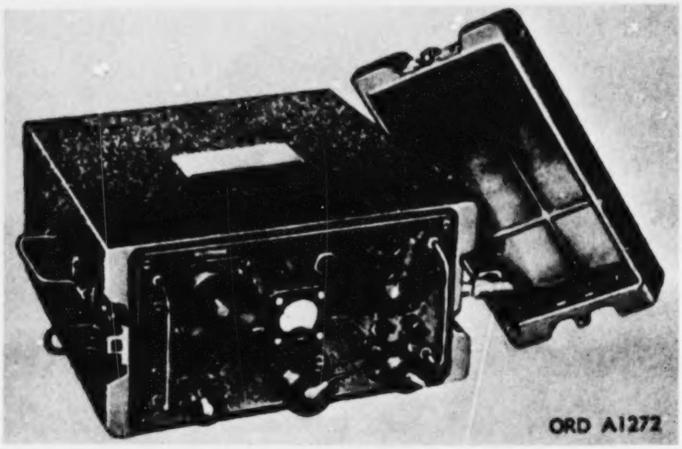
Shipped
Length ________________
Width ________________
Height ________________
Volume ________________
Gross weight ________________
Ship tons ________________

Outside Continental United States

Shipped
Length ________________
Width ________________
Height ________________
Volume ________________
Gross weight ________________
Ship tons ________________

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

SIGNAL GENERATOR: T4F



Model	*Line item No.*	*Federal stock No.*
T4F		

General

SIGNAL GENERATOR: T4F has yaw and pitch channels keyed to the same operating frequency as the flight control spoilers of the missiles. The generator converts the control stick movements to electric signals which, transmitted to the missile over the two-wire command line, develop and send a command to the missile to execute any required maneuver to direct the missile to the target. The generator contains the electronic circuits for the signals transmitted to the missile, the filaments and high voltage supply and telephone magneto. The generator has a selector dial, numbered 1 through 6, to select the desired missile to be launched. The generator is connected to the missile selection box.

Differences among models

The T4F signal generator can be used for the SS-10 system but cannot be used for the SS-11 system. The T9C signal generator:* will operate both systems.

Data plate location

Classification:

CHARACTERISTICS

Length	13.8 in.
Width	11.69 in.
Height	6.25 in.
Weight	29.54 lb
Timing Circuit	Multivibrator and differentiator
Timing network output	trigger signal
Frequency	fixed

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

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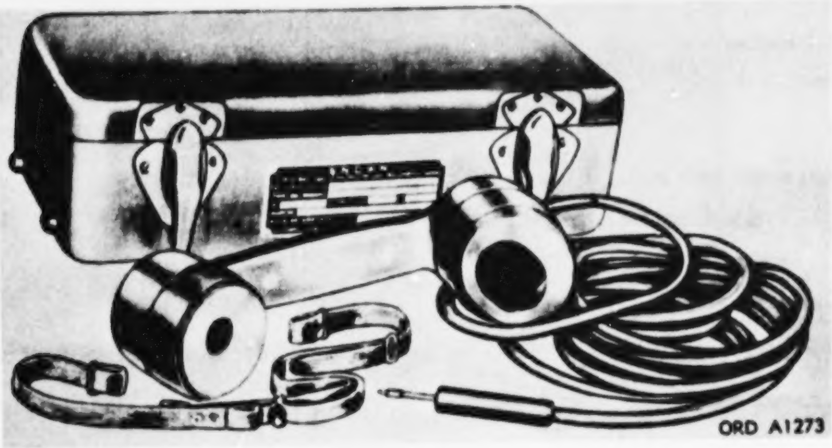
* For characteristics and data, see item on page 19-144.

TELEPHONE HANDSET:


ORD A1273

Model	*Line item No.*	*Federal stock No.*
		RSA-10021719

General

TELEPHONE HANDSET: is used by the gunner and assistant gunner to maintain contact during the missile launching.

Differences among models

Data plate location

Data plate is located on top side of the telephone box.

Classification:

CHARACTERISTICS

Telephone box:	
Weight	4.84 lb
Height	3.93 in.
Width	6.59 in.
Length	12.24 in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

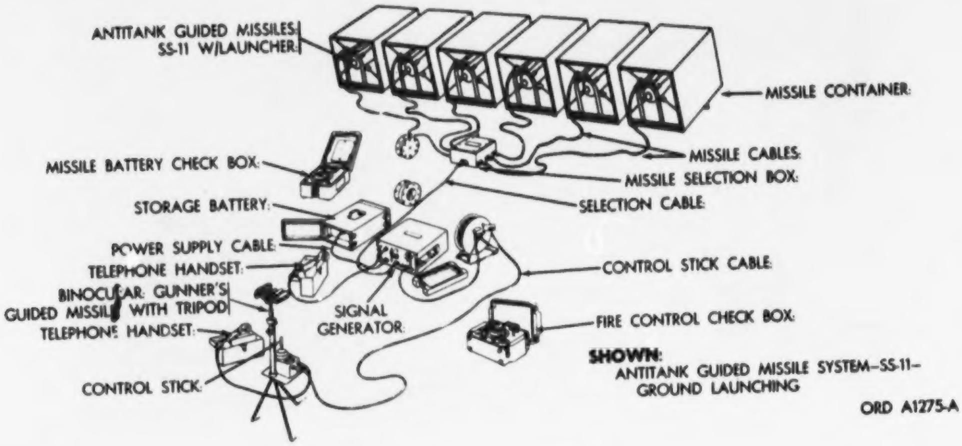
Outside Continental United States

Shipped
Length --
Width --
Height --
Volume --
Gross weight --
Ship tons --

References: TM 9-1400-450-12, TM 9-1400-450-20, TM 9-1400-450-30, TM 9-1400-450-35P.

ANTITANK GUIDED MISSILE SYSTEM: SS-11

(Includes missile, missile ground guidance, control, handling servicing, and testing equipment)


ANTITANK GUIDED MISSILES: SS-11 W/LAUNCHER
MISSILE CONTAINER
MISSILE BATTERY CHECK BOX
MISSILE CABLES
MISSILE SELECTION BOX
STORAGE BATTERY
SELECTION CABLE
POWER SUPPLY CABLE
TELEPHONE HANDSET
CONTROL STICK CABLE
BINOCULAR: GUNNER'S GUIDED MISSILE WITH TRIPOD
SIGNAL GENERATOR
TELEPHONE HANDSET
FIRE CONTROL CHECK BOX
CONTROL STICK

SHOWN: ANTITANK GUIDED MISSILE SYSTEM-SS-11-GROUND LAUNCHING

ORD A1275-A

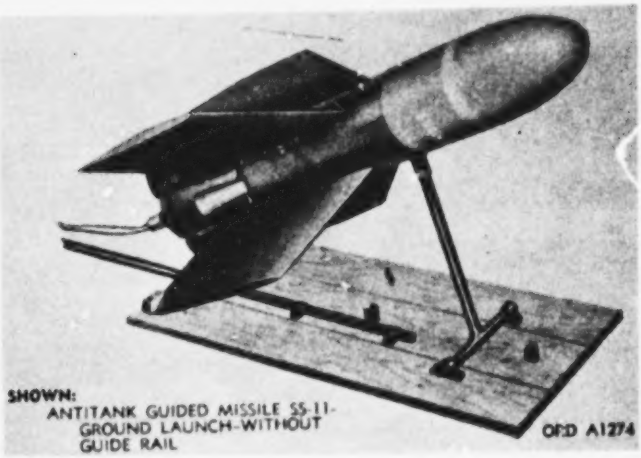
Model	*Line item No.*	*Federal stock No.*
SS-11, w/e		

General

ANTITANK GUIDED MISSILE SYSTEM: SS-11 is intended for use against ground targets. The system may be ground emplaced as adapted for truck launching. The SS-11 system has greater range and is capable of carrying a larger warhead than the SS-10 system. Therefore, the SS-11 system compliments the SS-10 system but does not replace it.

	Page
ANTITANK GUIDED MISSILE: SS-11, W/LAUNCHER	19-135
BATTERY STORAGE:	19-136
BINOCULAR: Gunners, guided missile, with tripod (For characteristics and data, see item in section 27).	
CABLE GROUP AND REELS	19-137
CONTROL STICK: Type A	19-139
FIRE CONTROL CHECK BOX:	19-140
MISSILE BATTERY CHECK BOX:	19-141
MISSILE CONTAINER:	19-142
MISSILE SELECTION BOX:	19-143
SIGNAL GENERATOR: T9C	19-144
TELEPHONE HANDSET:	19-145

ANTITANK GUIDED MISSILE: SS–11


SHOWN:
ANTITANK GUIDED MISSILE SS-11-
GROUND LAUNCH-WITHOUT
GUIDE RAIL
ORD A1274

Model	*Line item No.*	*Federal stock No.*
SS–11		
(As above) w/launcher and high-explosive warhead.		
(As above) w/launcher and high-explosive antipersonnel warhead.		
(As above) w/launcher and combined tear gas antipersonnel warhead.		
(As above) w/launcher and inert warhead.		

General

ANTITANK GUIDED MISSILE: SS–11 includes the finned missile body, three on-board missile batteries, and the warhead. The missile may be ground launched or launched from a Truck, Utility: ¼-ton, 4 x 4 or helicopter. For ground launching, the missile can be launched from the launcher while the launcher is still in the metal container or the missile and launcher may be removed from the metal container before launching. When using the wooden container, the missile can be launched without a guide rail. The wooden panel has a hinged rod to obtain the proper degree of elevation and another rod provides an anchor point to insure that the junction box is detached at missile launch. The missiles may be launched in different ways but can be mounted only in one of the following three ways:

(1) By suspension, using two upper attachment lugs.
(2) Resting on its own weight, using two lower resting lugs.
(3) From adjustable support rod.

Four interchangeable warheads are provided: a shaped charge for use against armored targets, a combined shaped and antipersonnel charge, a combined tear gas and antipersonnel charge, and an inert or practice warhead. Two flares are attached to the missile for increased visibility.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Type missile .... antitank-subsonic-rocket-propelled guided

Missile w/warhead attached:
  Weight:
    W/high explosive warhead ....
    W/high explosive antipersonnel warhead ....
    W/combined tear gas ....
    Antipersonnel warhead ....
    W/inert warhead ....
  Length ....
  Body diameter ....
  Span ....
  Batteries 3
  Flare:
    Type .... pyrotechnic
    No. used 2

PERFORMANCE

Propelled time of flight .... 22 seconds
Maximum effective range .... 3,830 yards
Minimum effective range .... 550 yards

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

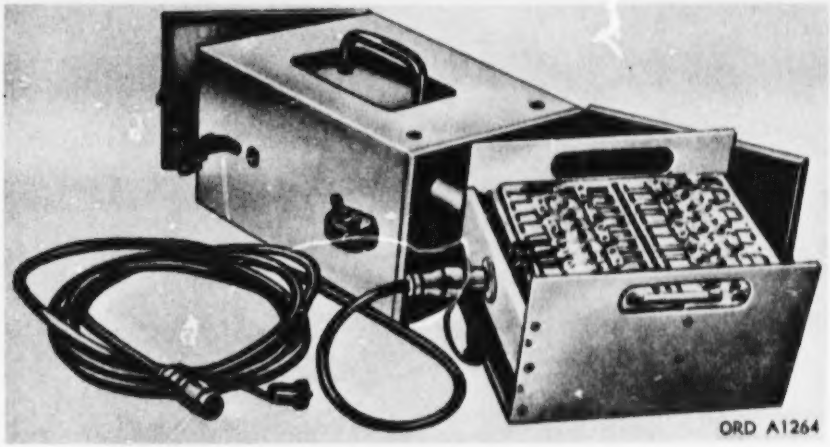
Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped
  Length ....
  Width ....
  Height ....
  Volume ....
  Gross weight ....
  Ship tons ....

References:

BATTERY STORAGE: (22 CELLS, 26 VOLTS, 9 AMP CAP. AT 2-HOUR RATE)



ORD A1264

Model	*Line item No.*	*Federal stock No.*

General

BATTERY STORAGE: (22 cells, 26 volts, 9 amp cap. at 2-hour rate) furnishes the field power supply to the generator for the missile ground system. Vehicle mounted systems use the vehicle battery.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Type	nickel-cadmium
Weight	34 lb
Height	6.45 in.
Width	8.5 in.
Length	13.26 in.
Recharging	Indefinite

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length ....

Width ....

Height ....

Volume ....

Gross weight ....

Ship tons ....

Outside Continental United States

Shipped

Length ....

Width ....

Height ....

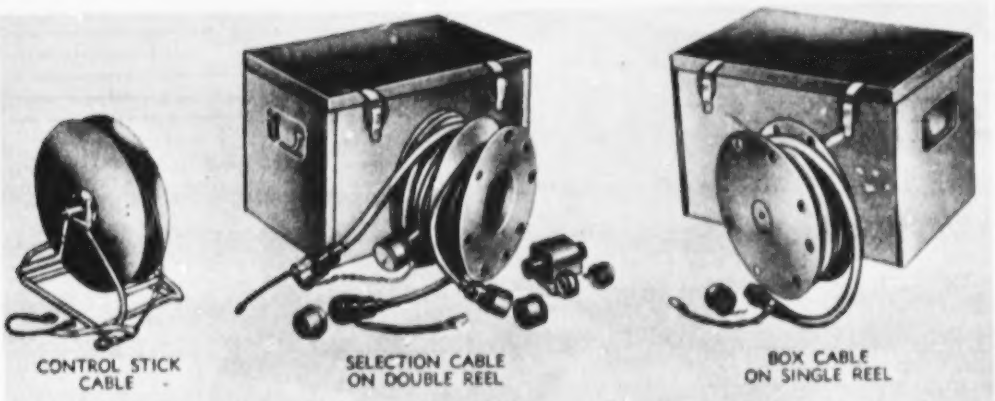
Volume ....

Gross weight ....

Ship tons ....

References:

CABLE GROUP AND REELS:



SHOWN:
CASES AND CABLE REELS

ORD A1266

Model	*Line item No.*	*Federal stock No.*
Ground launching cable		
Control stick		
Selection		
Missile		
Power supply		
Vehicle launching cable		
Control stick		RSA-10021333
Selection		RSA-10021332
Missile		RSA-10021334
Power supply		RSA-10021331

General

CABLE GROUP AND REELS: are electrical connecting cables of different lengths provided to interconnect the operating equipment. The cables are fitted with connections and are equipped with safety protector caps. Each cable required for ground launching is wound on a light metal reel to facilitate orderly packing and shipping. Cases for storing and shipping the wound reels are provided. The cables required for vehicle launching are attached to clips and dummy connectors during travel.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Ground launching:

Control stick cable (connects control stick with generator):

Type:

Conductor	7
Pin connector	7
Length	330 ft

Selection cable (connects generator with selection box):

Type	12-conductor
Length	50 ft

Missile cable (connects selection box with missiles):

Type	7-conductor
Length	50 ft
Issued	8 (2 spares)

Power supply cable (connects power supply to generator):

Type	2-conductor
Length	13 ft

Vehicle launching:

Vehicle control cable (RSA-10021333) (connects control stick to generator):

Types:

Conductors	7
Pin connector	7
Length	6.5 ft

Selector cable (RSA-10021332) (connects selection box to generator):

Types:

Conductor	12
Pin connector	12
Length	5 ft

Missile cable (RSA-10021334) (connects selection box to missiles):

Type	7-conductor
Length	6 ft
Required	3

Vehicle supply cable (RSA-10021331) (connects vehicle battery to generator):

Type	2-conductor
Length	6.5 ft

Crate, cable reel, empty:

Weight	16.50 lb
Height	13 in.
Width	11.80 in.
Length	18.50 in.

Reel, cable, w/control stick cable:

Weight	46.30 lb
Height	18.89 in.
Width	6.29 in.

Reel, cable, double, w/cables:

Weight	15.40 lb
Height	11.02 in.
Width	5.63 in.

Reel, cable, single, w/cable:

Weight	9.25 lb
Height	11.02 in.
Width	3.38 in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

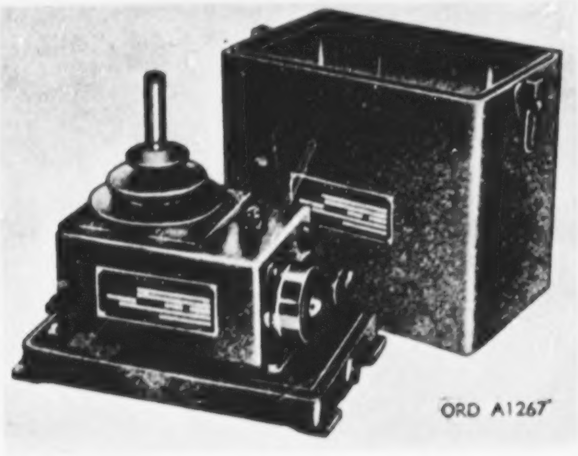
Shipped
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

Outside Continental United States

Shipped
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

References:

CONTROL STICK: TYPE A



Model	*Line item No.*	*Federal stock No.*
Type A		RSA-10021227

General

CONTROL STICK: type A connected to the generator, is designed to be manipulated to give command voltages that are transmitted to the missile by the generator. The control stick may be moved freely backward or forward, left or right, and is automatically returned to the neutral dead-center position by a spring. For ease when carrying, the control stick assembly is inclosed in a light metal case with detachable cover.

Differences among models

Data plate location

Identification plate located on covers.
Data plate located on control stick housing.

Classification

CHARACTERISTICS

Control stock box:	
Weight	7.05 lb
Height	9.64 in.
Width	6.06 in.
Length	10.11 in.
Equipped with:	
Telephone magneto	power for telephone bell
Micro socket	for telephone plug-in
Seven-pin plug	for cable connection to generator
Signal lamp	neon
Potentiometer (2)	one for yaw one for pitch voltages
Resistors (2)	variable w/two adjustments

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

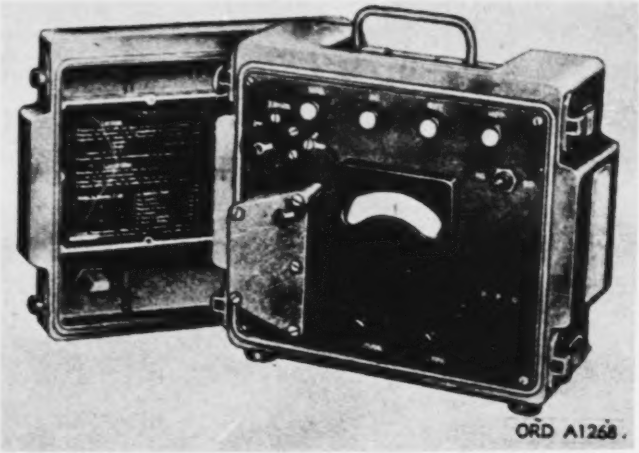
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References:

FIRE CONTROL CHECK BOX: (CIRCUIT TESTER)


ORD A1268.

Model	*Line item No.*	*Federal stock No.*
Battery relay model		1430-884-4999
Transistorized circuit model		

General

FIRE CONTROL CHECK BOX: (circuit tester) is designed to check the ground equipment, by simulating, to insure that the system is working properly, that the ignition sequence is correct, and that there is continuity in the corresponding circuits up to their respective terminals on the missile cable.

Differences among models

One model check box is operated by two 1.5-volt batteries.

One model check box transistorized is operated by one of the missile batteries.

Data plate location

Instruction plate is located on inside of cover.

Classification:

CHARACTERISTICS

Weight	14.97 lb
Height	6 in.
Width	11.25 in.
Length	9.5 in.
Circuitry:	
Ignition sequence	
Missile line	
Yaw and pitch relays	
Missile spoiler currents	
Use	circuit tester

PERFORMANCE

Ignition sequence:

Signal lamp (MFG) ---------- IG = ignition of gyro
Signal lamp (DG) ---------- UG = uncaging of gyro
Signal lamp (MFT) ---------- IF = ignition of flare
Signal lamp (MFB) ---------- IB = ignition of booster

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

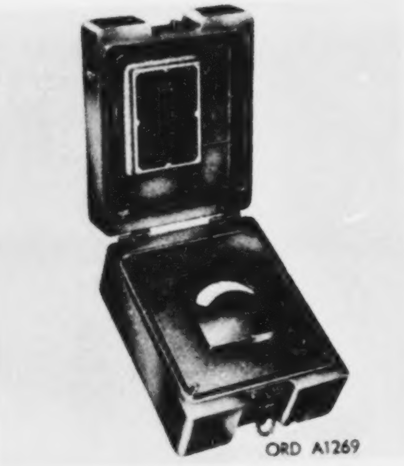
Shipped
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

Outside Continental United States

Shipped
Length ----------
Width ----------
Height ----------
Volume ----------
Gross weight ----------
Ship tons ----------

References:

MISSILE BATTERY CHECK BOX:



ORD A1269

Model	*Line item No.*	*Federal stock No.*
		1430–884–4998

General

MISSILE BATTERY CHECK BOX: is essentially a voltmeter and a resistance coil so constructed that the resistance load can be switched into the circuitry. This places a load on the battery with a corresponding drop in voltage. This missile battery check box is used to check the missile batteries before placing them in the missile.

Differences among models

Data plate location

Data plate is on the inside of cover.

Classification:

CHARACTERISTICS

Weight	9.47 lb
Height	5.11 in.
Length	10.03 in.
Width	7.75 in.
Resistor	56-ohm
Switch	3-position toggle
Use	missile battery tester

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

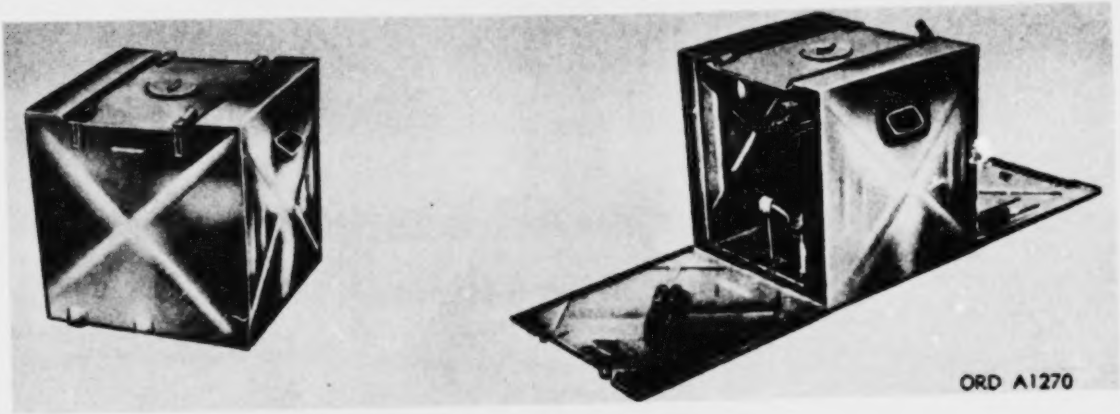
Shipped
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

Outside Continental United States

Shipped
- Length ....
- Width ....
- Height ....
- Volume ....
- Gross weight ....
- Ship tons ....

References:

MISSILE CONTAINER:


ORD A1270

Model *Line item No.* *Federal stock No.*

General

MISSILE CONTAINER: either wood or metal is used for transporting the missile, the missile launcher, and three on-board dry-cell missile batteries. For ground launching, the missile can be launched from the metal container without removing the launcher or missile from the container. Using the metal container, the front and rear covers are removed. The missile can be launched from the ground when used with the wood container. A panel of the wood container has a hinged rod which is used to obtain proper elevation and another rod to insure that the junction box is detached of missile launch. For vehicle launching, the missiles and launchers are removed from the containers and installed in the vehicle missile supports.

Differences among models

One type container is metal. One type container is wooden.

Data plate location

Classification:

CHARACTERISTICS

Metal:

Weight:
- W/launcher and missile (high explosive warhead) -- 141 lb
- W/launcher and missile (antipersonnel warhead)
- W/launcher and missile (combined tear gas and antipersonnel warhead) --------
- W/launcher and missile (inert warhead) --------

Length -------- 35 in.
Width -------- 17 in.
Height -------- 23 in.

Wooden:

Weight:
- W/launcher and missile (high explosive warhead) -- 156.5 lb
- W/launcher and missile (antipersonnel warhead)
- W/launcher and missile (combined tear gas and antipersonnel warhead) --------
- W/launcher and missile (inert warhead) --------

Length -------- 39 in.
Width -------- 24.4 in.
Height -------- 19.6 in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

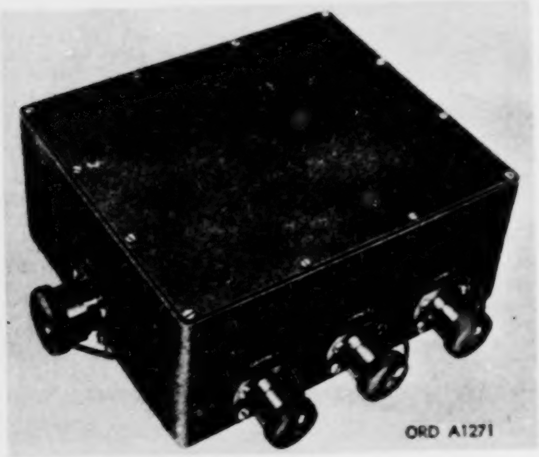
Shipped
- Length --------
- Width --------
- Height --------
- Volume --------
- Gross weight --------
- Ship tons --------

Outside Continental United States

Shipped
- Length --------
- Width --------
- Height --------
- Volume --------
- Gross weight --------
- Ship tons --------

References:

MISSILE SELECTION BOX:



Model	*Line item No.*	*Federal stock No.*
		1430-884-7860

General

MISSILE SELECTION BOX: governs the simultaneous connection and separate launching of one of the six missiles in the battery. Selection of the missile to be fired is done by positioning the selector switch to the number of the missile desired. When the firing button is pressed, the system energizes the relays in the selection box so that voltage and signals will be sent only to one missile. The missile selection box is connected to the missiles.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight	10.46 lb
Height	3.89 in.
Width	7.99 in.
Length	9.30 in.
Connection to generator	12-pin plug
Connection to corresponding missile cable	7-pin plug

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

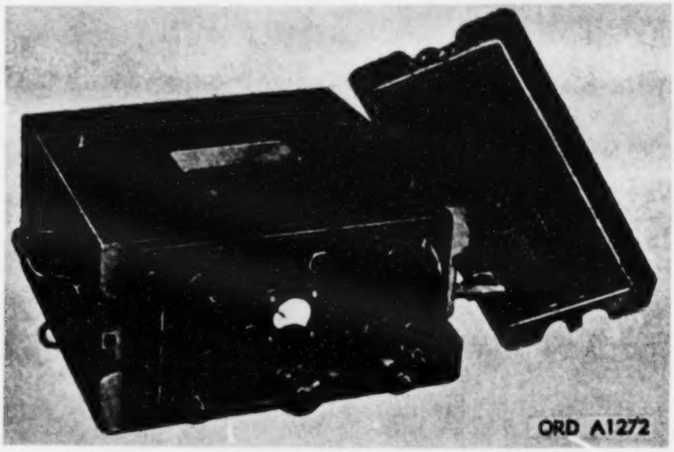
Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

References:

SIGNAL GENERATOR: T9C



ORD A1272

Model	*Line item No.*	*Federal stock No.*
T9C		1430-884-8011

General

SIGNAL GENERATOR: T9C, has yaw and pitch channels, keyed to the same operating frequency as the flight control spoiler of the missiles. The generator converts the control stick movements to electric signals which, transmitted to the missile over the two-wire command line, develop and send a command to the missile to execute any required movement to direct the missile to the target. The generator contains the electronic circuits for the signals transmitted to the missile, the filaments and high voltage supply and telephone magneto. The generator has a selector dial, numbered 1 through 6, to select the missile to be launched. The generator is connected to the missile selection box.

Differences among models

Generator T9C can be used with both SS-10 and SS-11 systems.

Data plate location

Classification:

CHARACTERISTICS

Weight	29.54 lb
Height	6.25 in.
Width	11.69 in.
Length	13.8 in.
Timing circuit	Phantastron
Timing network output	sawtooth signal
Frequency	fixed-slightly-variable
Voltage	DC

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

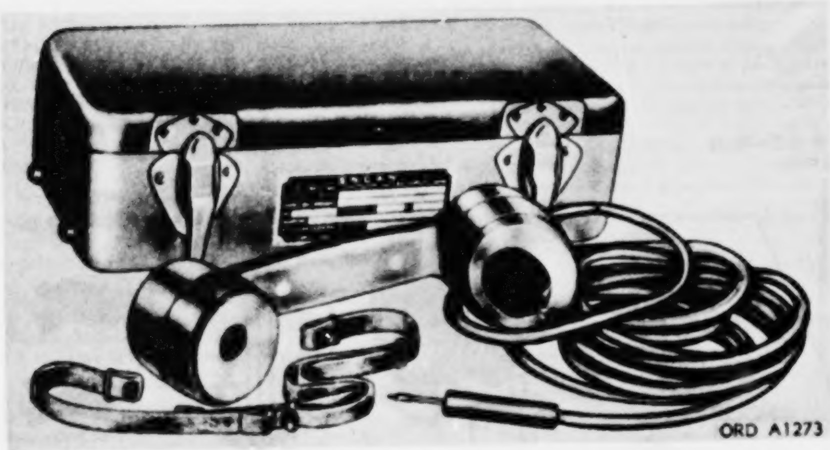
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References:

TELEPHONE HANDSET:



ORD A1273

Model	*Line item No.*	*Federal stock No.*
		RSA-10021719

General

TELEPHONE HANDSET: is used by the gunner and assistant gunner to maintain contact during the missile launching.

Differences among models

Data plate location

Data plate is located on top side of the telephone box.

Classification:

CHARACTERISTICS

Telephone box:

Weight	4.84 lb
Height	3.93 in.
Width	6.59 in.
Length	12.24 in.

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

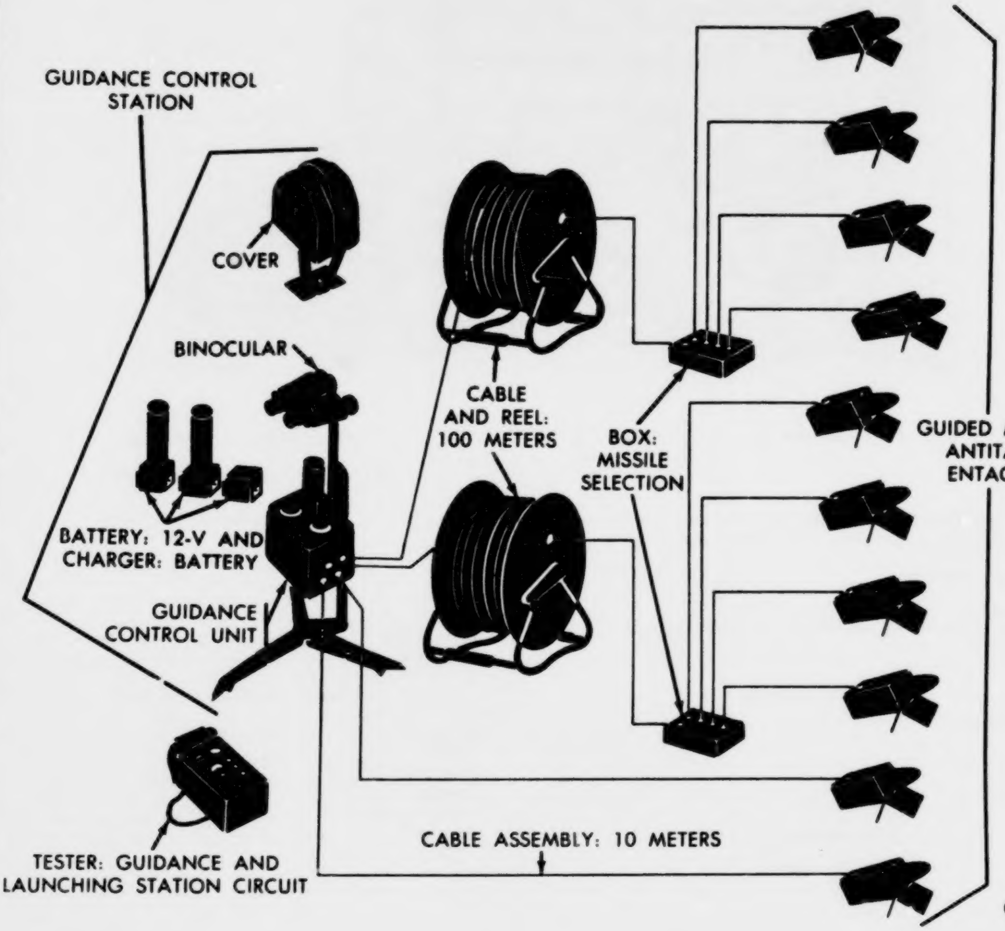
Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References:

ANTITANK GUIDED MISSILE SYSTEM: ENTAC

(Includes missile, missile ground guidance, control handling, and testing equipment)


GUIDANCE CONTROL STATION
COVER
BINOCULAR
BATTERY: 12-V AND CHARGER: BATTERY
GUIDANCE CONTROL UNIT
TESTER: GUIDANCE AND LAUNCHING STATION CIRCUIT
CABLE AND REEL: 100 METERS
BOX: MISSILE SELECTION
GUIDED MISSILE, ANTITANK: ENTAC 58
CABLE ASSEMBLY: 10 METERS

ORD A2082

Model	*Major item Line item No.*	*Federal stock No.*
ENTAC (APX/2228-36) less missile (warhead) and launching container.	J93997	1430-855-9769

General

ANTITANK: GUIDED MISSILE SYSTEM, ENTAC is intended for use against ground targets.

The missile is wire-guided. A tracer flare on the rear of the missile enables the operator to follow the flight of the missile.

The guidance signals are generated in a control unit as the operator moves a control stick which functions similar to the control stick in an airplane. These guidance signals travel through extension cable, and a selection box, to two fine steel fires which unwind from the missile as it flies. The guidance signals energize relays which distribute current from a battery in the missile to operate the missile controls. The missile does not roll in flight, but is stabilized by a gyroscope. Control is maintained by spoilers on the trailing edges of the fins.

In a protected position, ten missiles may be set up for firing. Two missiles are connected directly to the control unit by two 10-meter (33-ft) cables. The remaining eight missiles are connected, through two selection boxes, to two 100-meter (330-ft) cables. This combination permits eight missiles to be fired at a distance from the operator, thereby reducing the hazard of exposing his position to the enemy. Where the position is not protected or concealed, the two missiles connected directly to the control unit may be set up and fired quickly.

Page
ANTITANK GUIDED MISSILE: ENTAC 58, W/LAUNCHING CONTAINER 19-146B
BOX: MISSILE SELECTION 19-146D
CABLE ASSEMBLY: 10 METERS AND CABLE AND REEL: 100 METERS 19-146E
GUIDANCE CONTROL STATION: APX/2228-36/12 .... 19-146F
BATTERY: 12 VOLTS AND CHARGER: BATTERY 19-146G
BINOCULAR: 8 X 30, MDL51 AND TELFAC 1790-1 .... 19-146H
GUIDANCE CONTROL UNIT: (see page 19-146D).
TESTER: GUIDANCE AND LAUNCHING STATION CIRCUIT 19-146I

Classification: Standard A.

INSTRUCTIONAL MATERIAL

TRAINING SET, GUIDED MISSILE FLIGHT CONTROL (S-58 SIMULATOR)*

TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, ENTAC (DX-43)*

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped No. 1 of 2 packages in wooden container consisting of the following:

- 3—Batteries, 12 volts
- 3—Battery chargers
- 2—Boxes, missile selection
- 1—Cable, Battery charger
- 10—Cables, 10 meters
- 1—Guidance control station consisting of:
  - 1—Binocular
  - 1—Cover
  - 1—Guidance control unit
  - 1—Slide
  - 1—Support
  - 1—Tripod
  - 1—Tester, circuit

Length	28 in. (71.12 cm)
Width	16 in. (40.64 cm)
Height	14 in. (35.56 cm)
Volume	3.63 cu ft
Gross weight	200 lb (90.72 kg)
Ship tons	0.09

Shipped No. 2 of 2 packages in wooden container consisting of 2—cables, 100 meters and reels:

Length	32 in. (81.28 cm)
Width	14 in. (35.56 cm)
Height	16 in. (40.64 cm)
Volume	4.14 cu ft
Gross weight	170 lb (77.1 kg)
Ship tons	0.103

Shipped separate No. 3 of 3 packages containing 1—missile per waterproof metal shipping container.

Length	27.7 in. (70.4 cm)
Width	13.1 in. (33.3 cm)
Height	13.4 in. (34 cm)
Volume	2.813 cu ft
Gross weight	83.4 lb (37.9 kg)
Ship tons	0.0703

Outside Continental United States

Shipped No. 1 of 2 packages in wooden container consisting of the items as above.

Length	28 in. (71.12 cm)
Width	16 in. (40.64 cm)
Height	14 in. (35.56 cm)
Volume	3.63 cu ft
Gross weight	200 lb (90.72 kg)
Ship tons	0.09

Shipped No. 2 of 2 packages in wooden container consisting of 2—cables, 100 meters and reels:

Length	32 in. (81.28 cm)
Width	14 in. (35.56 cm)
Height	16 in. (40.64 cm)
Volume	4.14 cu ft
Gross weight	170 lb (77.1 kg)
Ship tons	0.103

Shipped separate No. 3 of 3 packages containing 1—missile per waterproof metal shipping container.

Length	31 in. (78.74 cm)
Width	15 in. (38.1 cm)
Height	15 11/32 in.
Volume	4.1289 cu ft
Gross weight	112 lb (50.9 kg)
Ship tons	0.1032

References: TB 9-4900-455-35, TM 9-1400-455-ESC, TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P/1, TM 9-4935-455-15, TM 9-4935-455-35P, TM 9-4935-456-35, TM 9-4935-456-35P, TM 9-6920-455-12, TM 9-6920-455-34, TM 9-6920-455-35P, TM 9-6920-461-12, TM 9-6920-461-12P, TM 9-6920-461-35, TM 9-6920-461-35P, SC 4935-92 CL-004.

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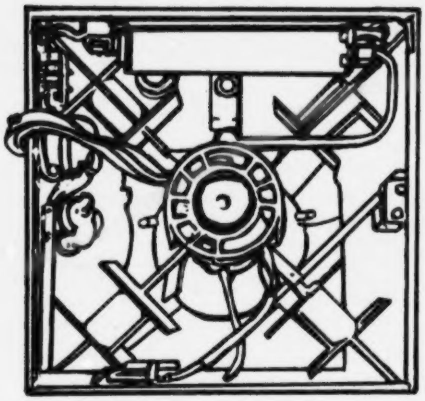
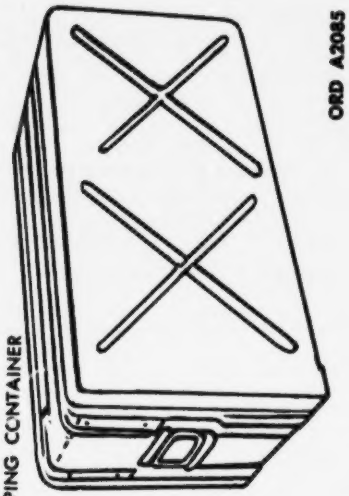
*For characteristics and data, see item in section 29.

ANTITANK GUIDED MISSILE: ENTAC 58 WITH LAUNCHING CONTAINER

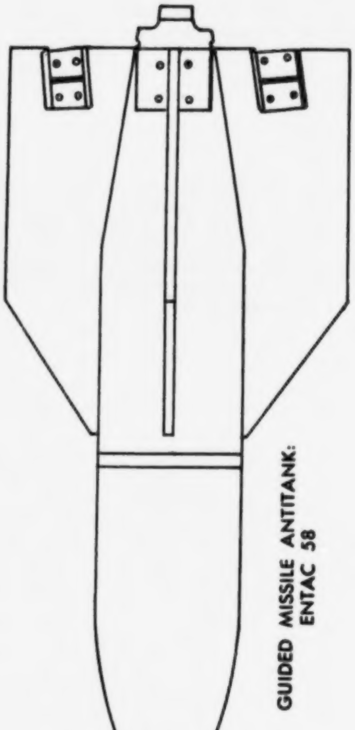


ENTAC MISSILE IN LAUNCHING CONTAINER (REAR VIEW)

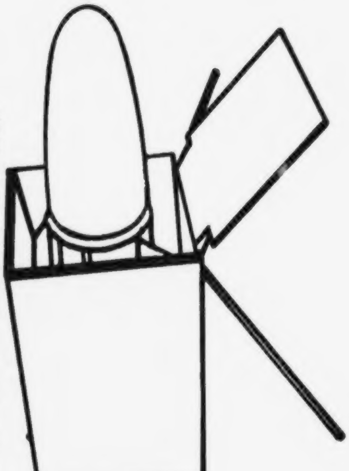


SHIPPING CONTAINER

ORD A2085



GUIDED MISSILE ANTITANK: ENTAC 58



ENTAC GUIDED MISSILE SETUP FOR LAUNCHING FROM LAUNCHING CONTAINER

Model	*Line item No.*	*Federal stock No.*
(As above) w/HEAT/120-mm warhead, live motor		1410-855-9707
(As above) training, w/inert warhead, live motor		1410-855-9706
(As above) training, w/simulated weight		1410-855-9714
(As above) training, completely inert, w/electrical equipment (for classroom training only).		1410-855-9710

General

ANTITANK GUIDED MISSILE: ENTAC 58 with launching container (FSN 8140-072-4910) is shipped in a waterproof metal shipping container. This container holds two units: one a combination case and launching container that holds the missile body, the other is a small compartment that holds the warhead. The missile is launched from the launching container which has all the electrical and mechanical connections for firing the missile. The missile is propelled by a two-stage solid propellant motor. A flare is located at the rear of the missile, and is used when necessary for increased visibility.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Missile:	
Weight	27 lb (12.25 kg)
Length	2 ft, 7½ in. (80 cm)
Diameter	5.9 in. (14.986 cm)
Wingspan	1 ft, 2.8 in. (37 cm)
Warhead:	
Weight	8.7 lb (3.9 kg)
Types	HEAT, inert, dummy

PERFORMANCE

Range:	
Minimum	400 meters
Maximum	2,000 meters

EQUIPMENT

Basic Issue Items: See TM 9-1400-455-12.

INSTRUCTIONAL MATERIAL

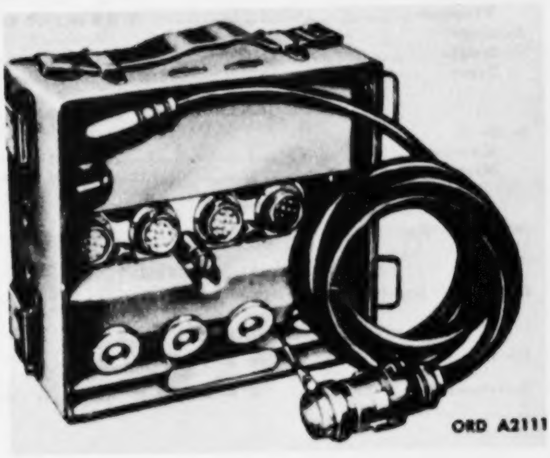
Instructional Material: See page 19-19-146A.

STORAGE AND SHIPMENT DATA

Storage and shipment data: See page 19-146A.

References: TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P/1.

BOX: MISSILE SELECTION



ORD A2111

Model	*Line item No.*	*Federal stock No.*
		1430-855 9782

General

BOX: MISSILE SELECTION, provides a means for firing four remotely located missiles without having to run a long cable to each missile. The selection box is connected to the guidance control unit by a 100-meter cable, and to each of the four missiles by a 10-meter cable. After one of the four missiles has been fired, the missile-selector switch on the control unit is turned to select the next missile to be fired, thus completing the circuit to the selection box. The selection box has four missile connectors, and a permanently attached 1.5-meter (5-ft) cable by which the box is connected to the 100-meter extension cable. The selection box also contains a flare switch, which permits the missiles to be fired without igniting the flares.

Differences among models:

There is only one model.

Data plate location

Classification

CHARACTERISTICS

Weight	11 lb (5 kg)
Length	7.9 in. (20.07 cm)
Width	7.1 in. (18.03 cm)
Height	3.9 in. (9.9 cm)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1400-455-12.

INSTRUCTIONAL MATERIAL

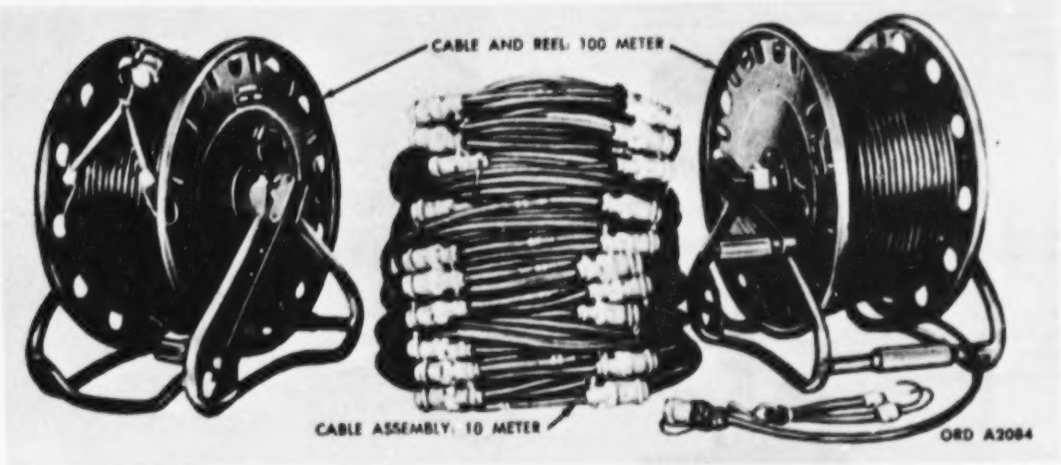
Instructional Material: See page 19-146A.

STORAGE AND SHIPMENT DATA

Storage and Shipment Data: See pages 19-146A through 19-146C.

References: TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P/1.

CABLE ASSEMBLY: 10-METER AND CABLE AND REEL: 100-METER



Model	*Line item No.*	*Federal stock No.*
Cable assembly		1430-855-9775
Cable and reel		1430-855-9731

General

CABLE ASSEMBLY: 10-METER AND CABLE AND REEL: 100-METER, are electrical connecting cables provided to interconnect the operating equipment. The cables are fitted with connectors which are equipped with protective covers, and mechanical safety devices to prevent wrong connections.

The two reel mounted 100-meter cables connect the two missile selection boxes to the guidance control unit. A selection box connector is mounted permanently on each reel, and accepts the connector on the 1.5-meter cable of each selection box.

Two of the 10-meter cables connect directly to the guidance control unit for firing "close" missiles, and the other eight 10-meter cables connect eight missiles to the two selection boxes.

Differences among models:

There is only one model each of the cable assemblies.

Data plate location

Classification

CHARACTERISTICS

Cable assembly:	
No.	
Type	⅜ in. diam
Length	32.8 ft (10-mm)
Cable and reel:	
Cable:	
No.	
Type	⅜ in. diam
Length	328 ft (100-mm)
Weight	3.5 lb (1.6 kg)
Reel:	
Weight	47.2 lb (21.4 kg)
Height	17.3 in. (43.8 cm)
Width	11.3 (28.7 cm)
Length	15.7 in. (39.7 cm)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1400-455-12.

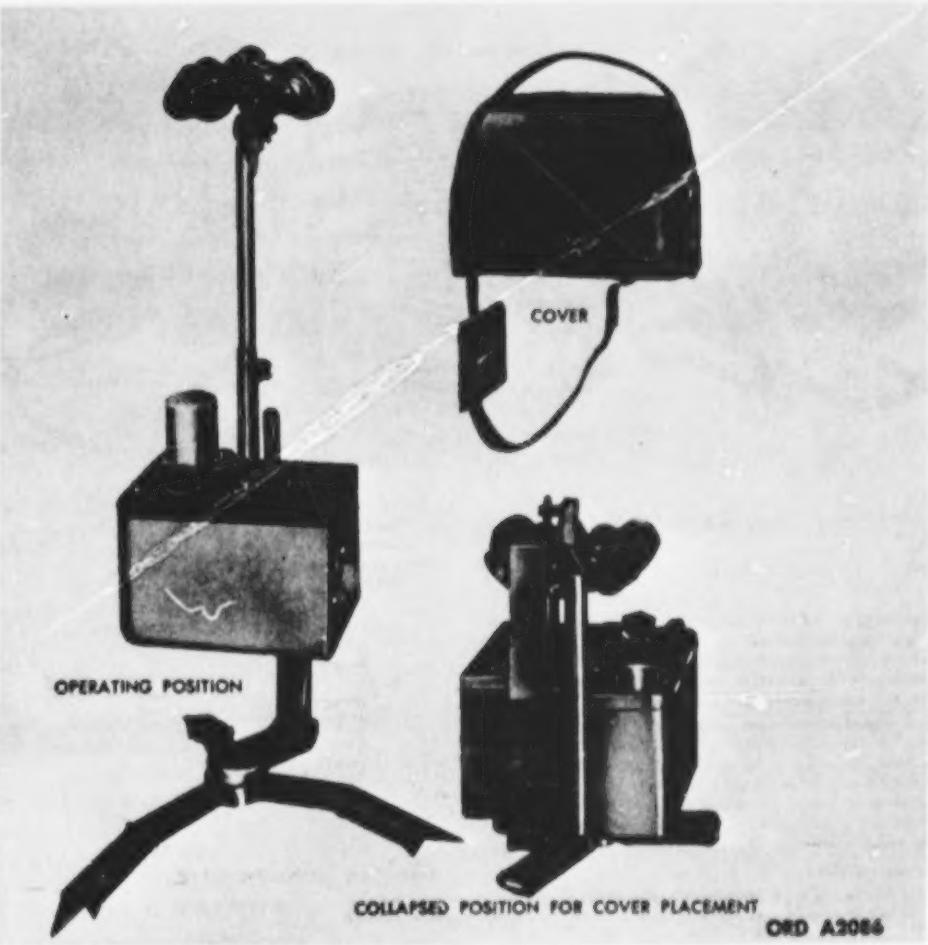
INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Storage and Shipment Data: See page 19-146A.

References: TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P/1.

GUIDANCE CONTROL STATION: APX/2228–36/12



Model	*Line item No.*	*Federal stock No.*
APX/2228–36/12		1430–855–9609

General

GUIDANCE CONTROL STATION: APX/2228–36/12, generates the signals that select, fire, and guide the missile. This station consists of the following components: Battery, 12 volts; Binocular, 8 x 30; Cable Assembly, battery charger; Charger, battery; Cover, guidance control unit; Guidance Control Unit; Mount, tripod, guidance control unit; Slide Assembly; and Support. A tripod is attached to a swivel mount on which is mounted a vertical support (arm). The guidance control unit is mounted on the vertical support with a slide. This slide can be moved on the vertical support to adjust the height of the control unit. A telescoping tube attached to the slide is used to adjust the height of the 8 x 30 binocular.

Differences among models:

The difference between the tactical and training equipment is in the type of binocular.

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1400–455–12.

INSTRUCTIONAL MATERIAL

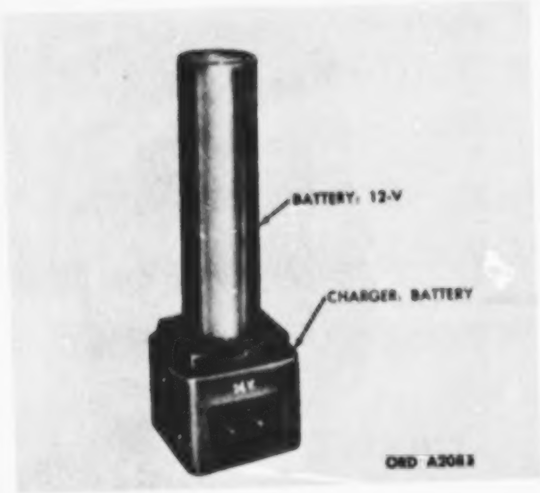
Instructional Material: See page 19–146A.

STORAGE AND SHIPMENT DATA

Storage and Shipment Data: See pages 19–146A through 19–146C.

References: TM 9–1400–455–12, TM 9–1400–455–35, TM 9–1400–455–35P/1.

BATTERY: 12-VOLTS AND CHARGER: BATTERY



Model	Line item No.	Federal stock No.
Battery		1430 855 9768
Charger		1430 855-9704

General

BATTERY: 12 VOLTS AND CHARGER: BATTERY, is used to furnish the field power supply to the guidance control unit. The battery consists of ten nickel-cadmium cells connected in series and contained in a nickel-plated steel case; it is 12-volt capacity. The case is constructed so it may be plugged into either the guidance control unit or charger. The charger operates from a 24-volt ac or dc source and provides a 50-milliampere charging current. The battery may be left on the charger indefinitely, but the fully-charged state is reached in a maximum of 80 hours. A charged battery will insure constant operation for one-half hour after 8 to 30 days storage depending on climate. The charger is connected to the vehicle battery by means of cable assembly, battery charger.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Battery:	
Weight	3 lb (1.37 kg)
Length	7.3 in. (18.54 cm)
Diameter	2.2 in. (5.59 cm)
Charger:	
Weight	1.3 lb (1.6 kg)
Height	3.5 in. (8.9 cm)
Width	3.5 in. (8.9 cm)
Length	4.3 in. (10.9 cm)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1400-455-12.

INSTRUCTIONAL MATERIAL:

Instructional Material: See page 19-146A.

STORAGE AND SHIPMENT DATA

Storage and Shipment Data: See pages 19-146A through 19-146C.

References: TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P/1.

BINOCULAR: 8 X 30, MDL51 AND TELFAC 1790–1

(Data and illustration to be published at a later date.)

Model	*Line item No.*	*Federal stock No.*
MDL51 (for tactical use)		1430-855-9681
TELFAC 1790-1 (for training use)		1430-871-5583

(Data and illustration to be published at a later date.)

General

BINOCULAR: 8 x 30, MDL51 AND TELFAC 1790-1, are components of the GUIDANCE CONTROL STATION: and are used in tactical and training for viewing the target and missile during flight.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Magnification	8 power
Aperture	30-mm
Field of view	
Exit pupil	
"F" number of objective	
Reticle horizontal scale	
Reticle range scale	
Filter	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1400-455-12.

INSTRUCTIONAL MATERIAL

Instructional Material: See page 19-146A.

STORAGE AND SHIPMENT DATA

Storage and Shipment Data: See pages 19-146A through 19-146C.

References: TM 9-1400-455-12, TM 9-1400-455-35P/1.

TESTER: GUIDANCE AND LAUNCHING STATION CIRCUIT

Model	*Line item No.*	*Federal stock No.*
		1430-855 9765

General

TESTER: GUIDANCE AND LAUNCHING STATION CIRCUIT. is used to test the firing and guidance circuits of the ENTAC missile system. The tester is connected in place of a missile and receives commands from the guidance control unit. The tester indicates by means of a meter and indicators, whether the battery-activation, booster-ignition, flare-ignition, and pitch and yaw circuits are functioning. Since the tester is connected to the ends of the extension cables, the test includes the cables, connectors, and selection boxes. A leather carrying case is issued with the tester, a plastic window in the cover of the case permits easy inspection of the tester's serial number.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Weight	5.5 lb (2 kg)
Length	7.9 in. (13.0 cm)
Width	6.7 in. (17.0 cm)
Height	5.1 in. (19.8 cm)

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1400-455-12.

INSTRUCTIONAL MATERIAL

Instructional Material: See page 19-146A.

STORAGE AND SHIPMENT DATA

Storage and Shipment Data: See pages 19-146A through 19-146C.

References: TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P/1.

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COMPUTER GROUP, GUIDED MISSILE: AN/MSA-6 ---------- 19-154
CONTROL CENTER, MISSILE BATTERY: AN/GTW-1 and AN/GTW-1A ---------- 19-155
ERECTOR, GUIDED MISSILE, SELF-PROPELLED: M2, w/e ---------- 19-156
FIRING STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSE-1 ---------- 19-158
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LAUNCHER, GUIDED MISSILE: M27, w/e ---------- 19-162
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SERVICING PLATFORM, TRUCK MOUNTED: M280, M280E1, w/e ---------- 19-167
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TRUCK, AMBULANCE: ¾-ton, 4x4, M43
(For characteristics and data, see item in section 20.)
TRUCK, PROPELLANT SERVICING, GUIDED MISSILE: X-M268 or M268 (XM268E1) w/PROPELLANT SERVICING KIT, GUIDED MISSILE: fuel (ORD No. 8028200) or w/PROPELLANT SERVICING KIT, GUIDED MISSILE: oxidizer (ORD No. 8028199) ---- 19-170
TRUCK, TRACTOR, WRECKER: 5-ton, 6x6, M246, w/winch
(For characteristics and data, see item in section 21.) (Used to transport warhead in a special container to assembly site and mating the warhead.)

The equipment listed below is required to complete the SYSTEM. It includes maintenance, repair, and checkout equipment specially designed for use with guided missiles and guided missile remote control systems.

BEAM, HANDLING, MISSILE CONTAINER: M5 ---------- 19-172
DECONTAMINATION KIT, GUIDED MISSILE: M74 ----------
DRAINING KIT, FUEL, GUIDED MISSILE: M72 ----------
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ELECTRONIC SHOP, TRUCK MOUNTED: AN/MPM-38 (SET A) ---------- 19-176
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SHOP EQUIPMENT SET, GUIDED MISSILE-GROUND HANDLING-SERVICING (SEMITRAILER MOUNTED: SET B) (SEMITRAILER XM499; SEMITRAILER XM500) ----- 19-179
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TEST STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSM-4 ---------- 19-181
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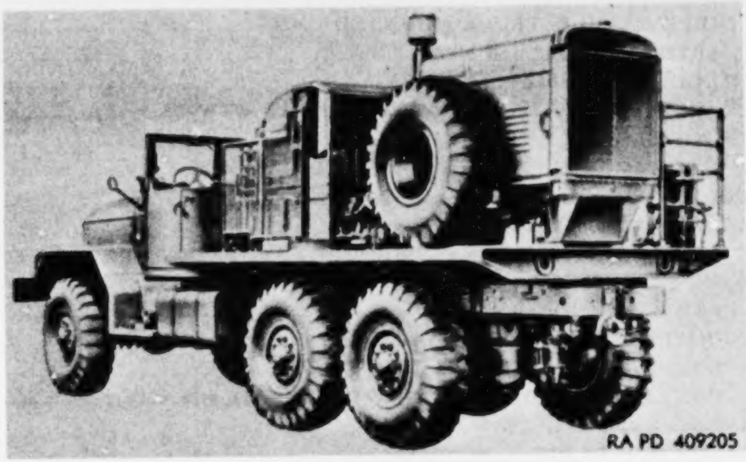
AIR COMPRESSOR, GUIDED MISSILE, TRUCK MOUNTED: M301


RA PD 409205

Model	*Line item No.*	*Federal stock No.*
M301		

General

AIR COMPRESSOR, GUIDED MISSILE, TRUCK MOUNTED: M301, is used to charge the four air tanks on truck-mounted air-servicer M350. The air compressor M301, consisting of an overhead valve gasoline engine, generator-engine set, air compressor, moisture knockout bottles, air drier assembly, compressor lubricator, skid and shrouding, is mounted on a modified TRUCK, CARGO: 5-ton, 6x6, M41.*

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Engine:

Manufacturer	Waukesha Motor Co.
Model	145 GKU (Modified)
Number of cylinders	6
Bore and stroke	5¼ x 6 in.
Piston displacement	779 cu in.
Type	Internal combustion, gasoline
Cooling system	Water-cooled, 18 gallon capacity

Air compressor:

Manufacturer	Clark Brothers Co.
Model	HO–6–4C
Number of cylinders	6
Number of compression stages	4
Cylinder bore:	
First stage	5 in.
Second stage	4 in.
Third stage	2 in.
Fourth stage	$1\frac{1}{16}$ in.
Discharge pressure	3,500 psi
Type	horizontal, balance-opposed
Cylinder action	horizontal, single-acting

Air drier assembly:

Manufacturer	Kemp Co.
Model	BA25 (electrically operated)
Type	Self-generating, dual-tower
Capacity	92 cfm @ 3,500 psi
Desiccant	25-lb charge of silica gel for each tower
Control system	manually controlled (4-hr cycle)
Maximum pressure load	3,600 psi
Weight	1,375 lb

Cooler assembly:

Manufacturer	Clark Brothers Co.
Model	116–1240, 116–1241
Type	cooling fin
Purpose	Intercooling and aftercooling of air and cooling of lubricating oil.

Clutch:

Manufacturer	Industrial Clutch Co.
Model	214 GT
Type	friction disk gear tooth

Flexible coupling:

Manufacturer	Thomas Flexible Coupling Co.
Model	312 CM
Type	Laminated ring
Lubrication	None required
Bore (max)	3⅛ in.
Angular misalinement (max)	1 deg
Paralled misalinement (max)	$\frac{1}{64}$ in.

Compressor lubricating pumps:

Cylinder lubrication:

Manufacturer	McCord Corp.
Model	Class SF forced-feed, multi-pump
Number of pumping units (feeds)	6
Oil reservoir capacity	8 pints
Type of feed sight	tubular pyrex "clearsite"
Drive	bottom rotary
Gear ratio	40 to 1

Internal lubrication:

Manufacturer	Tuthill Pump Co.
Model	O.L. oil pump
Pumping capacity	76 gallons per hr @ 1,350 rpm
Power source	spur gear from auxiliary driveshaft
Flow control	rotation (clockwise)
Type of mounting	four-bolt flange bracket

Compressor air filters:

Air intake filter:

Manufacturer	Vortex Manufacturing Co.
Model	GA 78 Series 658
Type	oil bath

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*For characteristics and data, see item in section 21.

CHARACTERISTICS—Continued

Compressor air filters—Continued

Air intake filter—Continued

Filter element—crimped, galvanized wiremesh screen with felt end.

Mounting	Opening to intake-header piping
Pipeline air filter element:	
Manufacturer	Poroloy Corp.
Model	ORD. No. 8142565
Filter element	woven stainless steel
Filtration	10 microns
Flow rate	150 cfm
Operating pressure	3,500 psi
Weight (less truck)	12,900 lb
Length (less truck)	13 ft, 11¾ in.
Width (less truck)	7 ft, 10 in.
Height (less truck)	6 ft, 2½ in.

PERFORMANCE

Engine speeds (permissible):	
Continuous	1,350 rpm
Intermittent duty	1,800 rpm
Air compressor speed (normal operating)	1,350 rpm

Air compressor dry air output (total)—not less than 92 cfm at 14.7 psi.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

FM 21-8.

STORAGE AND SHIPMENT DATA

Within Continental United States

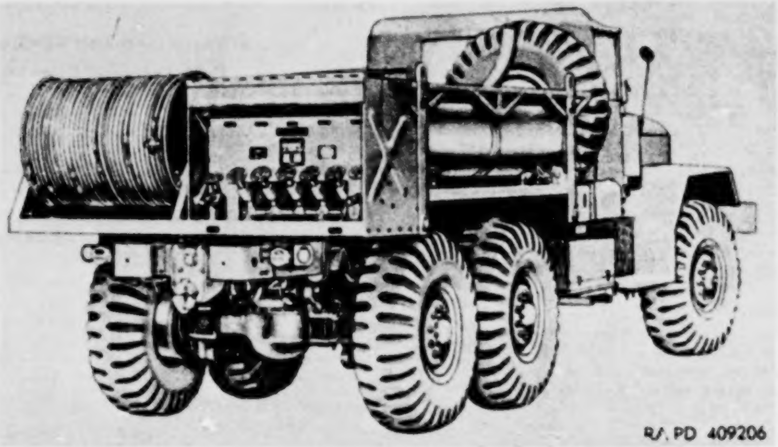
Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

Reference: TM 5-5409.

AIR SERVICER, GUIDED MISSILE, TRUCK MOUNTED: M350



Model	*Major item Line item No.*	*Federal stock No.*
M350, w/e	4–00153–00	1450–568–8187

General

AIR SERVICER, GUIDED MISSILE, TRUCK MOUNTED: M350, is used to charge the missile air tank with compressed air for the propulsion components. The air servicer M350 consists of a BODY, TANK, AIR SUPPLY: mounted on CHASSIS, TRUCK: 5-ton, 6 x 6, M39.* The air servicer stores and transports 53.6 cubic feet of air under a maximum working pressure of 3,500 psi (pounds per square inch). The compressed air in the air tanks is obtained from truck-mounted reciprocating compressor XM–301E1, and/or Joy model 80H compressor which is used as the main supply of high-pressure air for the missile.

Differences among models

Data plate location

The identification plate is located on the left side of the upper protective shield inside the manifold and gage housing.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	31,430 lb
Length	24 ft, 8 in.
Width	7 ft, 11 in.
Height	8 ft, 5 in.
Tank body, air supply:	
Weight	13,890 lb
Length	13 ft, 11 in.
Width	7 ft, 11 in.
Height	4 ft, 7 in.
Pneumatic-pressure tank (air tank):	
Weight	2,230 lb
Length	10 ft, 10 in.
Pneumatic-pressure tank (air tank)—Continued	
Diameter (outside)	1 ft, 6⅛ in.
Capacity	13.4 cu ft
Working pressure (max)	3,500 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–63.

INSTRUCTIONAL MATERIAL

Graphic Training Aid 9–25.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	25 ft, 10 in.
Width	7 ft, 11 in.
Height	8 ft, 5 in.
Volume	1,721.0 cu ft
Gross weight	31,430.0 lb
Ship tons	43.0

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y–63, TM 9–5062–12.

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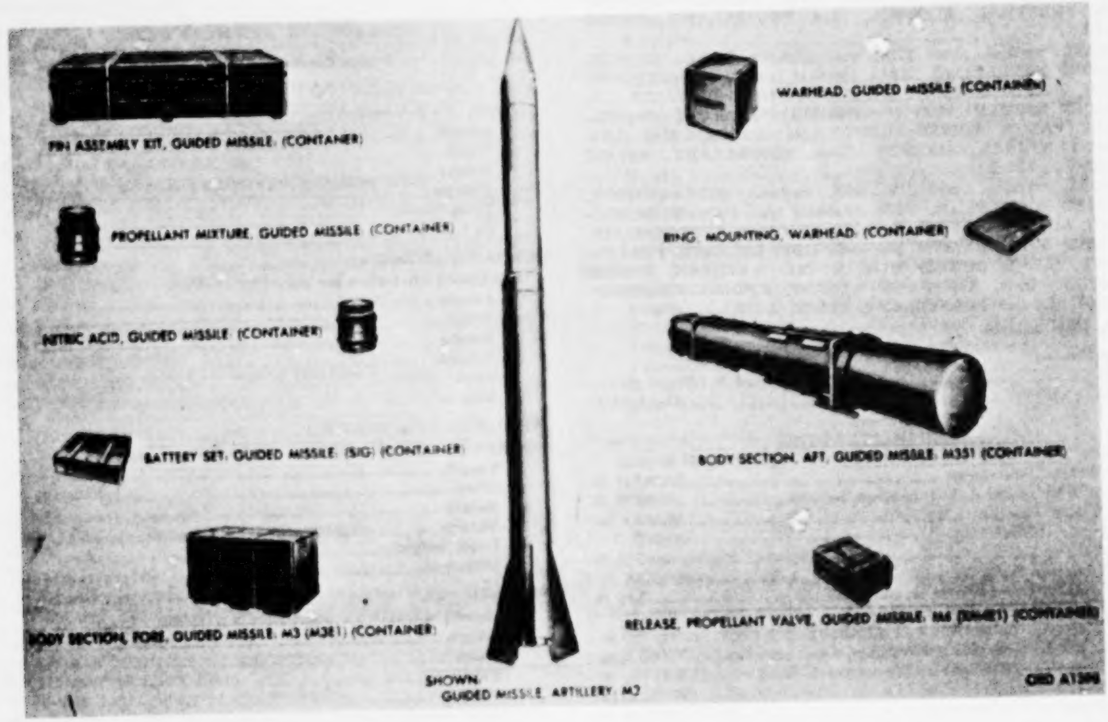
*For characteristics and data, see item in section 21.

GUIDED MISSILE, ARTILLERY: M2 AND M2A1


FIN ASSEMBLY KIT, GUIDED MISSILE (CONTAINER)
PROPELLANT MIXTURE, GUIDED MISSILE (CONTAINER)
NITRIC ACID, GUIDED MISSILE (CONTAINER)
BATTERY SET, GUIDED MISSILE (SIG) (CONTAINER)
BODY SECTION, FORE, GUIDED MISSILE M3 (M3E1) (CONTAINER)
WARHEAD, GUIDED MISSILE (CONTAINER)
RING, MOUNTING, WARHEAD (CONTAINER)
BODY SECTION, AFT, GUIDED MISSILE M351 (CONTAINER)
RELEASE, PROPELLANT VALVE, GUIDED MISSILE M6 (XM6E1) (CONTAINER)

SHOWN
GUIDED MISSILE, ARTILLERY M2

ORD A1396

Model	*Line item No.*	*Federal stock No.*
M2, Tactical (Type II), less warhead. (Classified).		1410-706-5476
M2, Tactical (Type II), less warhead.		1410-706-5474
M2, Training (Type II), with warhead (M15).		1410-706-5475
M2, Training (Type IIA), with warhead.		1410-691-5518
M2A1, Tactical (Type IIB), less warhead.		1410-707-3948
M2A1, Training (Type IIB), with warhead.		1410-706-5473

General

GUIDED MISSILE, ARTILLERY: M2 or M2A1 (Type II or Type IIA CORPORAL), w/ or w/o warhead (called rounds) is a field artillery, medium-range, surface-to-surface guided missile which is fired from a mobile ground installation and is designed to deliver a warhead to targets 50 to 130 kilometers from the firing area. The missile consists of the battery set, aft body section, fore body section, fin assembly kit, nitric acid, propellant mixture, propellant valve release, warhead, and neutralizer, rocket propellant, and safety shower unit. A liquid propellant rocket engine propels the missile, while its direction of flight and range are controlled by an interchange of signals among electronic units within the missile and overriding commands from stations on the ground. The missile uses a combination auto pilot and command-guidance system.

Differences among models

The differences, as indicated by the descriptions of the various guided missile combinations shown below, are: different types of aft body sections; different types of control surfaces; and the guided missile M2A1 does not use batteries. Type IIB rounds (M2A1) from serial number 2173 use an air-turbine-alternator power system. Rounds prior to serial number 2173 use batteries for missile electrical power.

A complete round for the following artillery guided missiles consists of: M2, tactical, type II, less warhead—BODY SECTION, GUIDED MISSILE: aft, M4 (tactical type II); BODY SECTION, GUIDED MISSILE: fore, M3; FIN ASSEMBLY KIT, GUIDED MISSILE: M60 (type II); BATTERY SET, GUIDED MISSILE: 4 BB-406/U and 2 BB-407/U (for types II and IIA); RELEASE, PROPELLANT VALVE, GUIDED MISSILE: M4; PROPELLANT ANILINE-FURFURAL ALCOHOL; and PROPELLANT, NITRIC ACID.

M2, tactical, type IIA, less warhead—BODY SECTION, GUIDED MISSILE: aft, M4E5 (tactical type IIA); BODY SECTION, GUIDED MISSILE: fore, M3; FIN ASSEMBLY KIT, GUIDED MISSILE: XM60E2 (type IIA); BATTERY SET, GUIDED MISSILE: 4-BB-406/U and 2-BB-407/U (for types II and IIA); RELEASE, PROPELLANT VALVE, GM: M4; PROPELLANT, ANILINE-FURFURAL ALCOHOL; and PROPELLANT, NITRIC ACID.

M2, training, type II, with warhead—BODY SECTION, GUIDED MISSILE: aft, M4 (training type II); BODY SECTION, GUIDED MISSILE: fore, M3; FIN ASSEMBLY KIT, GUIDED MISSILE: M60 (type II); BATTERY SET, GUIDED MISSILE: 4-BB-406/U and 2 BB-407/U (for types II and IIA); RELEASE, PROPELLANT VALVE, GUIDED MISSILE: M4; WARHEAD, GUIDED MISSILE: inert, XM15; PROPELLANT, ANILINE-FURFURAL ALCOHOL; and PROPELLANT, NITRIC ACID.

M2, training, type IIA, with warhead—BODY SECTION, GUIDED MISSILE: aft, XM4E2 (training type IIA); BODY SECTION, GUIDED MISSILE: fore, M3; FIN ASSEMBLY KIT, GUIDED MISSILE: XM60E2 (type IIA); BATTERY SET, GUIDED MIS-

Differences among models—Continued

SILE: 4-BB-406/U and 2-BB-407/U (for types II and IIA); RELEASE, PROPELLANT VALVE, GUIDED MISSILE: M4; WARHEAD, GUIDED MISSILE: inert, XM15; PROPELLANT, ANILINE-FURFURAL ALCOHOL; and PROPELLANT, NITRIC ACID.

M2A1, tactical, type IIB, less warhead—BODY SECTION, GUIDED MISSILE: aft, M4A1 (tactical type IIB); BODY SECTION, GUIDED MISSILE: fore, M3; CONTROL SURFACES KIT, GUIDED MISSILE: M113 (for type IIB); RELEASE, PROPELLANT VALVE, GUIDED MISSILE: M4; PROPELLANT, ANILINE-FURFURAL ALCOHOL; and PROPELLANT, NITRIC ACID.

M2A1, training, type IIB, with warhead—BODY SECTION, GUIDED MISSILE: aft, M4E4 (training type IIB); BODY SECTION, GUIDED MISSILE: fore, M3; CONTROL SURFACES KIT, GUIDED MISSILE: M113 (for type IIB); RELEASE, PROPELLANT VALVE, GUIDED MISSILE: M4; WARHEAD, GUIDED MISSILE: inert, XM15; PROPELLANT, ANILINE-FURFURAL ALCOHOL; and PROPELLANT, NITRIC ACID.

Data plate location

Classification

M2	Standard B (OTCM 36841)
M2A1 (M2E2)	Standard B

CHARACTERISTICS

Missile:	
Weight (at takeoff)	11,247 lb
Weight (without fuel, oxidiser, or air)	4,461 lb
Length (overall)	45 ft, 4 in.
Fore body section:	
Length	9 ft
Diameter	2 ft, 6 in.
Weight, less payload	125 lb
Aft section:	
Diameter, air tank (major diameter)	2 ft, 6⅞ in.
Diameter, propellant tanks	2 ft, 6 in.
Diameter, propellant tanks, w/tunnels installed	3 ft, ⅝ in.
Length	36 ft, 4 in.
Weight (w/o batteries)	2,531 lb
Control surfaces:	
Stabilizers:	
Length (east and west)	6 ft, 8¾ in.
Length (north and south)	6 ft, 4½ in.
Weight (north or south)	21 lb, 2 oz
Weight (east, including antennas)	22 lb, 11 oz
Weight (west, including antennas)	24 lb, 15 oz
Rudders:	
Length	2 ft
Width	1 ft, 3¾ in.
Weight (each)	11 lb, 13 oz
Propellants:	
Fuel:	
Weight in missile	2,148 ± 10 lb
Freezing point, at sea level	—45° F.
Boiling point, at sea level	± 340° F.
Oxidiser:	
Weight in missile	4,428 ± 10 lb
Freezing point, at sea level	—61° F.
Boiling point, at sea level	+ 188° F.
Air:	
Weight (25.5 cu ft at 2,350 psi at +59 degrees)	323 lb

PERFORMANCE

Velocity:	
Maximum	2,200 mph
Impact	1,600 mph
Range	50 kilometers (31 miles) to 125 kilometers (78 miles)
Height (at zenith of trajectory)	41.84 kilometers (25 miles)
Thrust (max)	20,700 lb
Rate of fire	

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y3.

INSTRUCTIONAL MATERIAL

WARHEAD, GUIDED MISSILE: M15 (inert-training item) (C) TB 9-5036-3-1.

STORAGE AND SHIPMENT DATA

Within Continental United States

Missile body fore section: M3	
Shipped 1 fore section per tactical container	
Length	5 ft, 9⅞ in.
Width	3 ft, 2⅝ in.
Height	3 ft, 4 in.
Volume	63.7 cu ft
Gross weight	425 lb
Ship tons	1.6
Missile body aft section:	
Shipped 1 aft section per container (XM351)	
Length	38 ft, 5 in.
Width	4 ft, 1 in.
Height	4 ft, 10 in.
Volume	758.1 cu ft
Gross weight	9,107 lb
Ship tons	18.10
Warhead mounting ring XM1:	
Shipped 1 mounting ring per wooden box	
Length	2 ft, 9⅝ in.
Width	2 ft, 8⅛ in.
Height	6⅛ in.
Volume	3.9 cu ft
Gross weight	34.4 lb
Ship tons	0.09
Warhead:	
Shipped 1 warhead per wooden crate w/skids	
Length	2 ft, 5⅞ in.
Width	2 ft, 5⅞ in.
Height	3 ft, 3⅝ in.
Volume	21.4 cu ft
Gross weight	1,527 lb
Ship tons	0.6
Fin assembly kit:	
Shipped 1 kit per wooden crate (M60)	
Length	8 ft, 2⅛ in.
Width	2 ft, 9⅛ in.
Height	3 ft, ⅛ in.
Volume	69.4 cu ft
Gross weight	590 lb
Ship tons	1.8
Shipped 1 kit per crate (XM60E2)	
Length	7 ft, 8½ in.
Width	3 ft, 10⅛ in.
Height	1 ft, 10$\frac{1}{16}$ in.
Volume	54.6 cu ft
Gross weight	571 lb
Ship tons	1.4
Batteries:	
Shipped 6 batteries per wooden packing case	
Length	3 ft, 1¼ in.
Width	2 ft, 6 in.
Height	11⅝ in.
Volume	7.6 cu ft
Gross weight (approx)	150 lb
Ship tons	0.19
Propellant valve release:	
Shipped 25 releases per wooden box	
Length	1 ft, 6 in.
Width	11⅛ in.
Height	10 in.
Volume	1.22 cu ft
Gross weight (approx)	42½ in.
Ship tons	0.03

STORAGE AND SHIPMENT DATA—Continued

Within Continental United States—Continued

Guided missile nitric acid:

Shipped nitric acid per aluminum drum

Height	2 ft, 5½ in.
Diameter	2 ft, 3⅛ in.
Volume	10.76 cu ft
Gross weight	521
Ship tons	0.27
Gallons	40

Guided missile propellant mixture:

Shipped propellant mixture per aluminum drum

Height	2 ft, 10⅝ in.
Diameter	2 ft, 3⅝ in.
Volume	14.6 cu ft
Gross weight	497 lb
Ship tons	0.37
Gallons	55

Outside Continental United States

Missile body fore section: M3

Shipped 1 fore section per tactical container

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Missile body aft section:

Shipped 1 aft section per container (XM351)

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Warhead mounting ring XM1:

Shipped 1 mounting ring per wooden box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Warhead:

Shipped 1 warhead per wooden crate w/skids

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Fin assembly kit:

Shipped 1 kit per wooden crate (M60)

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped 1 kit per crate (XM60E2)

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Batteries:

Shipped 6 batteries per wooden packing case

Length	
Width	
Height	
Volume	
Gross weight (approx)	
Ship tons	

Propellant valve release:

Shipped 25 releases per wooden box

Length	
Width	
Height	
Volume	
Gross weight (approx)	
Ship tons	

Guided missile nitric acid:

Shipped nitric acid per aluminum drum

Height	
Diameter	
Volume	
Gross weight	
Ship tons	
Gallons	

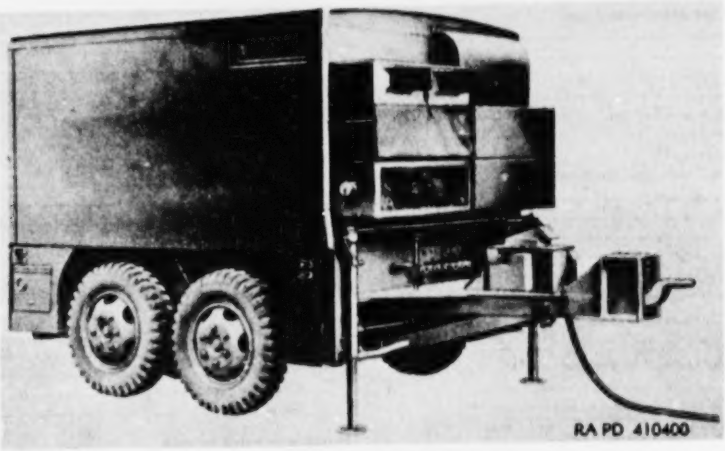
Guided missile propellant mixture:

Shipped propellant mixture per aluminum drum

Height	
Diameter	
Volume	
Gross weight	
Ship tons	
Gallons	

References: SB 9–162, SNL Y–3, TM 9–1410–201–35, TM 9–5035–12.

COMPUTER GROUP, GUIDED MISSILE: AN/MSA-6



Model	*Major item Line item No.*	*Federal stock No.*
AN/MSA-6	4-10737	1430-568-8189

General

COMPUTER GROUP, GUIDED MISSILE: AN/MSA-6, receives signals from the RADAR SET: AN/MPQ-25 and RADIO SET: AN/MRQ-7, and this information is used to calculate command data to alter the missile trajectory in elevation and azimuth. The computer group AN/MSA-6 consists of a trailer, van: XM325 * which contains seven electrical equipment cabinets (equipment racks). These cabinets (racks) are used for mounting the computer station electronic components; intercommunication station, computer test set, spare amplifier, voltage regulators, power supply, guided missile flight simulator, computer controls, relay amplifier, electrical test panel, computer test set, oscilloscope, amplifier assembly, amplifier-control group, coder group, amplifier-computer, thrust termination computer, simulator group, and amplifier-oscillator. The van trailer XM325 is a reinforced sheet steel van mounted on the frame which is supported by a rocker arm type undercarriage to assure ground contact at all four wheels when operating over rough terrain.

Differences among models

Data plate location

The trailer identification plate is mounted above the drawbar on the right front of the trailer.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight (gross)	8,900 lb
Length	16 ft, 1⅞ in.
Width	8 ft, 0 in.
Height	8 ft, 1 in.
Tread (c/c)	6 ft, 11⅝ in.
Ground clearance	9¼ in.
Floor to ground	1 ft, 3¼ in.
Floor area occupied	125.9 sq ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-51.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	16 ft, 2 in.
Width	7 ft
Height	7 ft, 11 in.
Volume	1,095.8 cu ft
Gross weight	10,250 lb
Ship tons	27.4

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-51, TM 9-5070, (CM) TM 9-5044-10.

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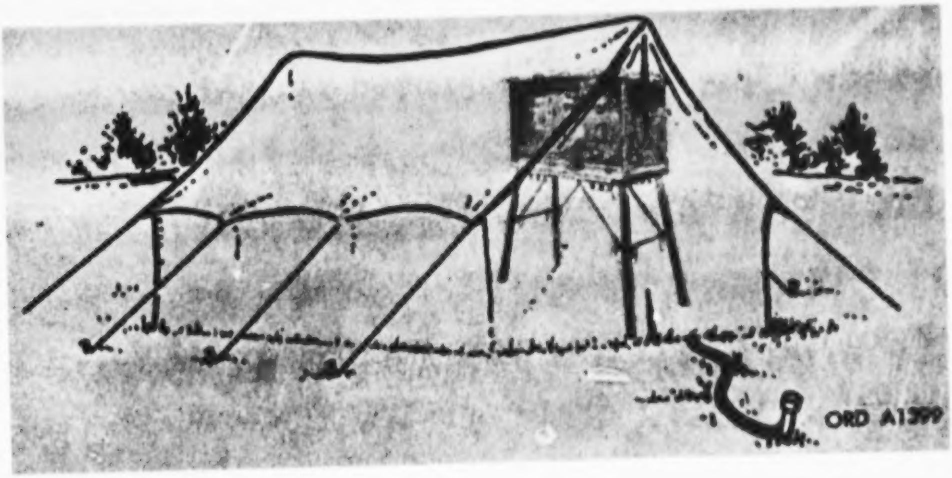
*Characteristics and data will be added at a later date.

CONTROL CENTER, MISSILE BATTERY: AN/GTW-1 AND AN/GTW-1A



Model	*Major item Line item No.*	*Federal stock No.*
AN/GTW-1	4-10820-00	1430-568-8190
AN/GTW-1A	4-10820-20	1430-610-3306

General

CONTROL CENTER, MISSILE BATTERY: AN/GTW-1 and AN/GTW-1A, in the CORPORAL ground guidance center, furnishes the battery commander with a central communication system: telephone, command speaker, and intercommunciations. The telephone and intercommunciation are two-way circuits; the command speaker operates only one way, from the missile battery control center to the other units. The control center AN/GTW-1A consists of the intercommunication station, control indicator, switchboard, audio frequency amplifier.

Differences among models

Data plate location

Classification

AN/GTW-1 .... Standard B (OTCM 36841).

AN/GTW-1A ....

CHARACTERISTICS

Weight	812 lb
Length	3 ft, 9½ in.
Width	1 ft, 7 in.
Height	2 ft, 4⅝ in.
Volume	16.75 cu ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-53.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

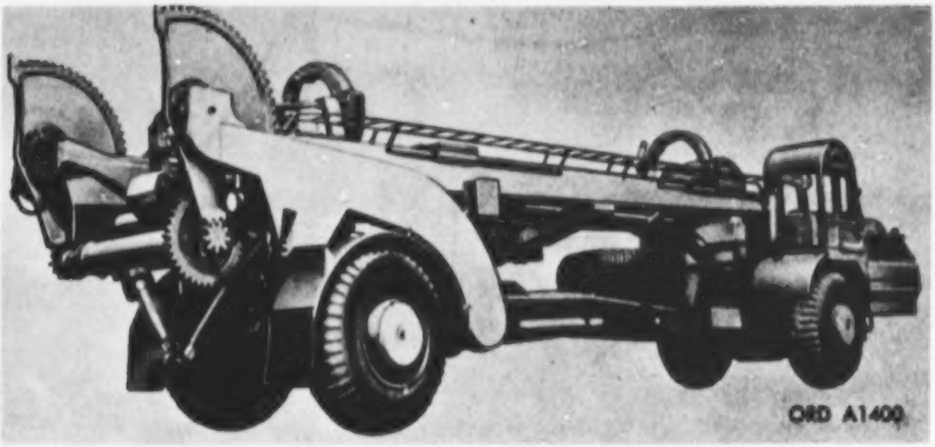
Shipped	
Length	4 ft, 6⅛ in.
Width	2 ft, 3⅛ in.
Height	3 ft, 3⅛ in.
Volume	23.8 cu ft
Gross weight	562 lb
Ship tons	0.6

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-53, TM 9-5076-10.

ERECTOR, GUIDED MISSILE, SELF-PROPELLED: M2, W/E



Model	Major item Line item No.	Federal stock No.
M2	4-13500-00	1450-568-8191

General

ERECTOR, GUIDED MISSILE, SELF-PROPELLED: M2, w/e, is a four-wheel, electrically operated and controlled vehicle used for handling, transporting, and erecting artillery guided missile M2. Erecting functions are performed in conjunction with guided missile launcher M27; warhead mating functions are performed in conjunction with warhead trailer M311 or warhead-handling slings. The erector M2 can operate effectively over smooth and hard surfaces at speeds up to 30 miles per hour and can ford water up to 60 inches deep. Primary power for operation and control of the erector is obtained from the power unit which consists of an engine, ac generator, and dc generator. Major components of the erector M2 are the chassis base main frame, fuel tank and cab-mounting assembly, rotary boom, traversing support, handling ring clamp assembly, oscillating axle, drive wheel assemblies, power unit, ac motors, and electrical control system components.

Differences among models

Data plate location

The vehicle identification plate is attached to the rotary-boom cradle on the erector chassis and contains the erector model number and serial number. The engine identification plate is located on the engine-accessory section near the governor.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight:	
Gross	70,340 lb
Net	59,510 lb
Length:	
With boom in carry position	46 ft, 8 in.
With boom in missile-loading position	77 ft, 3 in.
Height with boom in carry position	11 ft
Wheel base	30 ft
Width	9 ft, 6 in.
Ground clearance:	
Frame (center section)	2 ft, 5 in.
Front axle	2 ft, 2 in.
Rear axle	1 ft, 1 in.

Capacities:	
Controller (variable resistor)	7 gal
Drive-wheel electromechanical actuator	3 gal
Elevator-motor gear assembly	1⅛ gal
Engine oil system	11 gal
Field-control-and-rectifier assembly	37 gal
Fire extinguishers (each)	5 lb (CO_2)
Fuel tank (nominal)	285 gal
Hoist-motor gear assembly	1⅛ gal
Oil-bath air cleaner	1¼ gal
Rotary-boom-motor gear assembly	1⅝ gal
Steering-motor gear assembly	1½ gal
Vane-type rotary blower	½ gal
Crew	2
Electrical power sources:	
Lighting, ignition, and dc brakes	two 12-volt batteries in series
Manual-control switches	24-volt dc
Missile handing	ac generator
Propelling system	dc generator
Steering	ac generator
Engine	Continental, 6 cyl., Model AO-895-4
Payload	11,650 lb
Tire pressure	50 lb

PERFORMANCE

Angle of approach	23 deg
Angle of departure	40 deg
Engine horsepower (gross)	375 bhp @ 2,800 rpm
Fording depth (max)	5 ft
Gradability (max)	15-percent slope
Grade for emplacing missile (max)	10-percent slope
Governed rpm (max)	2,150
Speed (max):	
Forward	30 mph
Reverse	30 mph
Minimum turning circle (dia), right or left	45 ft
Operating time (one tank of gas)	5.5 hr

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-61.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

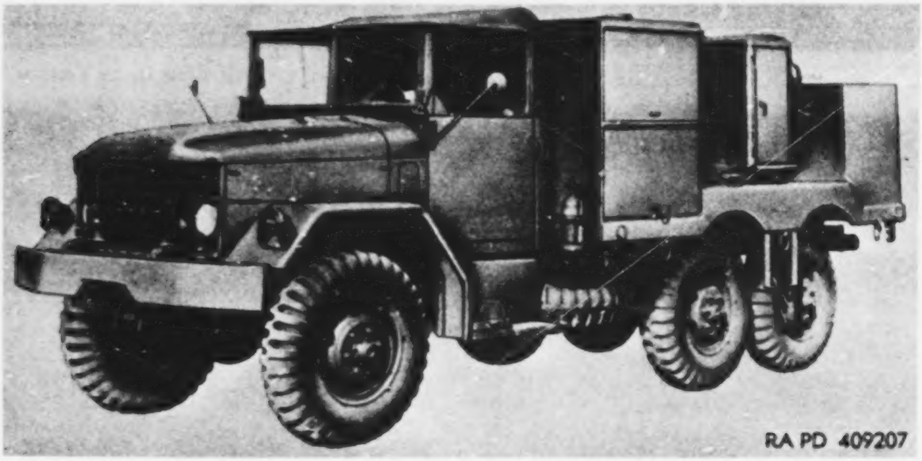
Shipped	
Length	46 ft
Width	8 ft, 2 in.
Height	11 ft, 2 in.
Volume	4,876.7 cu ft
Gross weight	59,510 lb
Ship tons	121.9

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-61, TM 9-5048-12, TM 9-5048-34, TM 9-5049.

FIRING STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSE-1 (FIRING SET, INCLUDING PANEL, FIRING, GUIDED MISSILE: SB-391/MSE-1; CHASSIS, TRUCK: 2½ TON, 6X6, M44)



RA PD 409207

Model	*Major item* *Line item No.*	*Federal stock No.*
AN/MSE-1, w/e	4-14457	1430-568-8192

General

FIRING STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSE-1, w/e, consisting of FIRING SET, INCLUDING PANEL, FIRING, GUIDED MISSILE: SB-391/MSE-1 with CHASSIS, TRUCK: 2½ TON, 6X6, M44, provides remote control for missile firing functions and furnishes external power and emergency air to the missile during prefiring operations. The firing station is mounted on chassis, truck: 2½-ton, 6x6, M44.* The firing station consists of the forward compartment (contains the propellant valve release tester, firing panel, telephones and head sets, 28-volt motor generator, communications cables, warhead junction box, telescope laying equipment, terminal box, 125-volt motor generator, and cables), aft cable compartment (contains six cable reels with cables), engine generator, and missile propellant shutoff (emergency air system).

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Firing station:	
Weight	19,120 lb
Length	22 ft, 11 in.
Width	7 ft, 11 in.
Height	9 ft, 5½ in.
Motor generator:	
Weight	275 lb
Length	2 ft, 3 3/16 in.
Width	1 ft, 2⅝ in.
Height	1 ft, 1 13/16 in.
Motor generator:	
Weight	175 lb
Length	3 ft, 3 in.
Width	1 ft, 2¾ in.
Height	1 ft, 3 7/32 in.
Power distribution panel:	
Weight	191 lb
Length	1 ft, 9¾ in.
Power distribution panel—Continued	
Width	1 ft, 7 in.
Height	1 ft, 8⅛ in.
Guided missile firing panel:	
Weight	45 lb
Length	1 ft, 6 3/32 in.
Width	9 in.
Height	1 ft, 6 in.
Terminal box:	
Weight	31 lb
Length	1 ft, 3 in.
Width	7 in.
Height	1 ft, 3¾ in.
Telescope laying equipment:	
Weight	20 lb
Length	1 ft, 10⅝ in.
Width	1 ft, 7 in.
Height	1 ft, 8⅛ in.
Telephone boxes:	
Weight	
Length	1 ft
Width	5 in.
Height	5 in.
Engine generator:	
Weight	2,270 lb
Length	7 ft, 11½ in.
Width	2 ft, 5 in.
Height	4 ft, 2 in.
Emergency air system:	
Weight	77 lb
Length	1 ft, 1/16 in.
Width	9 13/16 in.
Height	2 ft, 7⅝ in.

PERFORMANCE

Engine generator:	
Input	none required
Output	15 kw, 60cps, 115v, 3φ, delta-connected, B phase grounded

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* For characteristics and data, see item in section 21.

PERFORMANCE—Continued

Motor generator (115v.):

Input	3.75 kw, 115v, 3φ, 60 cps
Output	3 kw, 115v dc

Motor generator (28v):

Input	2.5 kw, 115v, 3φ, 60 cps
Output	2 kw, 28v dc

Power distribution panel:

Input	Output
10 kw, 115v, 3φ, 60 cps from engine generator.	3.75 kw, 115v, 3φ, 60 cps to 115v motor generator.
3 kw, 115v dc from 115v motor generator.	2.5 kw, 115v, 3φ, 60 cps to 28v motor generator.
2 kw, 28v dc from 28v motor generator.	0.5 kw, 115v, 1φ, 60 cps to gyro heaters.
	0.4 kw, 80-140v dc to battery charging circuit.
	3.0 kw, 115v dc to firing panel and missile.
	2.0 kw, 28v dc to missile warhead.
	0.1 kw, 28v, 1φ, ac to firing panel.

Firing panel:

Input	Output
115v dc from power distribution panel.	Various control voltages to missile, control unit, an emergency air system.
115v, 1φ, 400 cps from missile.	Voice-to-launcher telephone and field wire line terminals or radio terminals.
Various metering voltages from missile.	Tailbreak-signal-to-field-wire line terminals or radio terminals.
Various indication voltages from missile.	
Indication voltage from emergency air system.	Firing indication to connector J19804.

Launcher telephones:

Input	Output
Voice from firing panel telephone, field wire line terminals, or radio terminals.	Voice-to-firing panel telephone, field wire line terminals, or radio terminals.

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-55.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	22 ft, 11 in.
Width	7 ft, 11 in.
Height	9 ft, 5⅛ in.
Volume	1,715.0 cu ft
Gross weight	1,912.0 lb
Ship tons	42.9

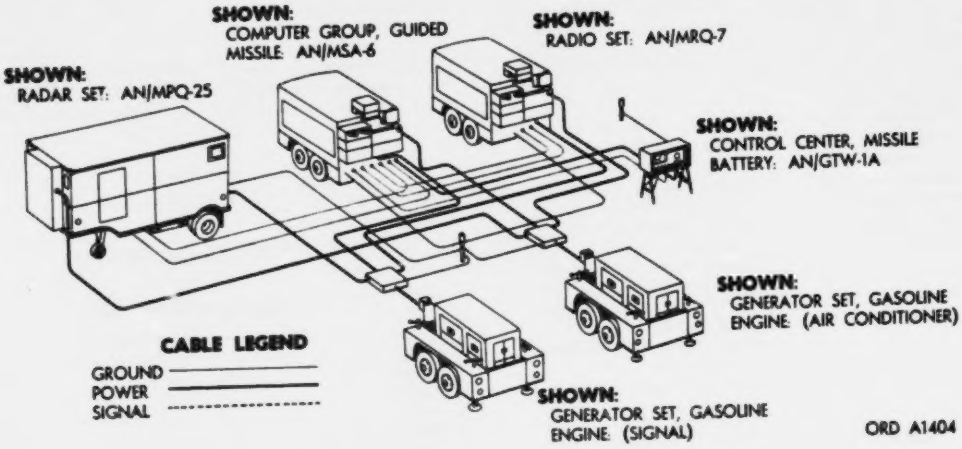
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-55, TM 9-5064-10.

INTERCONNECTING GROUP: OA–771/G


SHOWN:
COMPUTER GROUP, GUIDED
MISSILE: AN/MSA-6
SHOWN:
RADIO SET: AN/MRQ-7
SHOWN:
RADAR SET: AN/MPQ-25
SHOWN:
CONTROL CENTER, MISSILE
BATTERY: AN/GTW-1A
SHOWN:
GENERATOR SET, GASOLINE
ENGINE: (AIR CONDITIONER)
CABLE LEGEND
GROUND
POWER
SIGNAL
SHOWN:
GENERATOR SET, GASOLINE
ENGINE: (SIGNAL)

ORD A1404

Model	*Major item Line item No.*	*Federal stock No.*
OA–771/G, w/e	4–18696–00	1430–668–8193

General

INTERCONNECTING GROUP: OA–771/G, w/e, provides the cabling required for transmission of power, signals, communications, and the common grounding network among the units of the ground guidance center. It consists of 22 cables, 12 cable reels, 2 power junction boxes (interconnecting boxes J–633/G), and 2 ground stakes.

Differences among models

Data place location

Classification: Standard B (OTCM 36641).

CHARACTERISTICS

Cable (ORD No. 7652774):

Quantity required	5
Function	signal
Number of wires	19
Length extend	225 ft
Identification tag	none

Cable (ORD No. 7659723):

Quantity required	6
Function	power
Number of wires	3
Length extended	150 ft
Identification tag	none

Cable (ORD No. 8129216):

Quantity required	2
Function	power
Number of wires	3
Length extended	25 ft
Identification tag	CX–2917/G

Cable (ORD No. 8129217):

Quantity required	3
Function	ground
Number of wires	1
Length extended	160 ft
Identification tag	CX–2875/G

Cable (ORD No. 8129218):

Quantity required	2
Function	ground
Number of wires	1
Length extended	20 ft
Identification tag	CX–2[illegible]5/G

Cable (ORD No. 8103914):

Quantity required	1
Function	power
Number of wires	2
Length extended	250 ft
Identification tag	CX–3194/G

Cable (ORD No. 8103973):

Quantity required	1
Function	ground
Number of wires	1
Length extended	30 ft
Identification tag	CX–2875/G

Ground stake (8103998):

Quantity required	2
Function	ground
Number of wires	1
Length extended	6 ft
Identification tag	none

Junction boxes (ORD No. 8125004):

Quantity required	2
Function	power
Number of wires	3
Length	1 ft, 10 in.
Width	1 ft, 10 in.
Height	7 in.

Cable reel (ORD No. 6548879):

Quantity required	12
Function	storage
Width	1 ft, 10 in.
Diameter	2 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–60.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Box #1:

Shipped

Length	6 ft, 2 in.
Width	2 ft, 1 in.
Height	1 ft, 6 in.
Volume	19.2 cu ft
Gross weight	394.0 lb
Ship tons	0.5

STORAGE AND SHIPMENT DATA—Continued

Within Continental United States—Continued

Box #2:

Shipped

Length	1 ft, 10½ in.
Width	2 ft, 2⅓ in.
Height	2 ft, 2⅓ in.
Volume	8.6 cu ft
Gross weight	190.0 lb
Ship tons	0.2

Box #3:

Shipped

Length	1 ft, 10½ in.
Width	2 ft, 2⅓ in.
Height	2 ft, 2⅓ in.
Volume	8.6 cu ft
Gross weight	318.0 lb
Ship tons	0.2

Outside Continental United States

Box #1:

Shipped

Length	
Width	
Height	

Shipped—Continued

Volume	
Gross weight	
Ship tons	

Box #2:

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

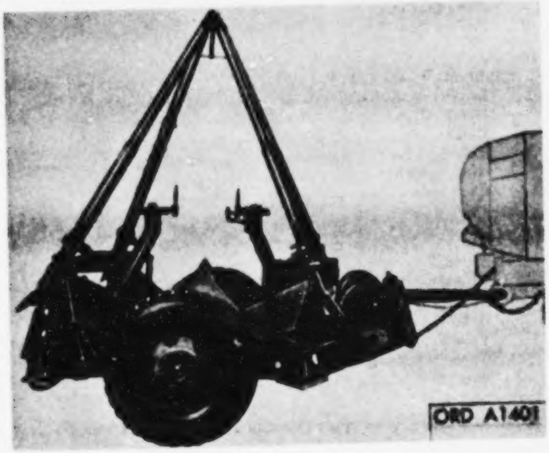
Box #3:

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-60, TM 9-5076-10, SM 9-5-1430, 40, 50.

LAUNCHER, GUIDED MISSILE: M27, W/E


ORD A1401

Model	*Major item Line item No.*	*Federal stock No.*
M27	4–20760–00	1440–568–8194

General

LAUNCHER, GUIDED MISSILE: M27, w/e, is a mobile, manually operated item of ground handling equipment. The launcher is designed to support the CORPORAL II artillery guided missile in the vertical position during final phases of preflight checks and during missile launching. The launcher is capable of being towed over relatively rough terrain. The launcher M27 consists of a launcher base assembly, two wheel and axle assemblies, four outrigger assemblies, four strut assemblies, turntable, speed decreaser gear assembly, blast shield, two maintenance platforms, air lines, and electrical system.

Differences among models

Data plate location

The identification plate is attached to the forward part of the base and to the left of the speed decreaser gear assembly.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Traveling position:	
Weight (with wheel and axle assemblies)	5,440 lb
Length	11 ft, 8 in.
Width	7 ft, 11 in.
Height	10 ft, 10 in.
Track	7 ft
Lunette height above ground	3 ft, 2 in.
Ground clearance (to bottom of base)	1 ft, 3 in.
Emplaced:	
Weight (without wheel and axle assemblies)	4,600 lb
Height	10 ft
Ground clearance (to bottom of base)	6 in.
Strut assemblies:	
Type	telescoping screw
Static load (max), each	10,000 lb
Strut length:	
Extended	9 ft, 4 in.
Retracted	7 ft, 10 in.
Travel	1 ft, 6 in.
Outrigger jacks:	
Type	telescoping screw
Static load (max), each	8,000 lb
Length:	
Extended	3 ft, 6 in.
Retracted	1 ft, 6 in.
Travel	2 ft
Tire:	
Type	nondirectional, cross-country
Size	11.00 X 20
Air pressure	30 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–68.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	17 ft, 7 in.
Width	8 ft, 1½ in.
Height	5 ft, 7⅝ in.
Volume	577.3 cu ft
Gross weight	5,595.0 lb
Ship tons	48.1

Outside Continental United States

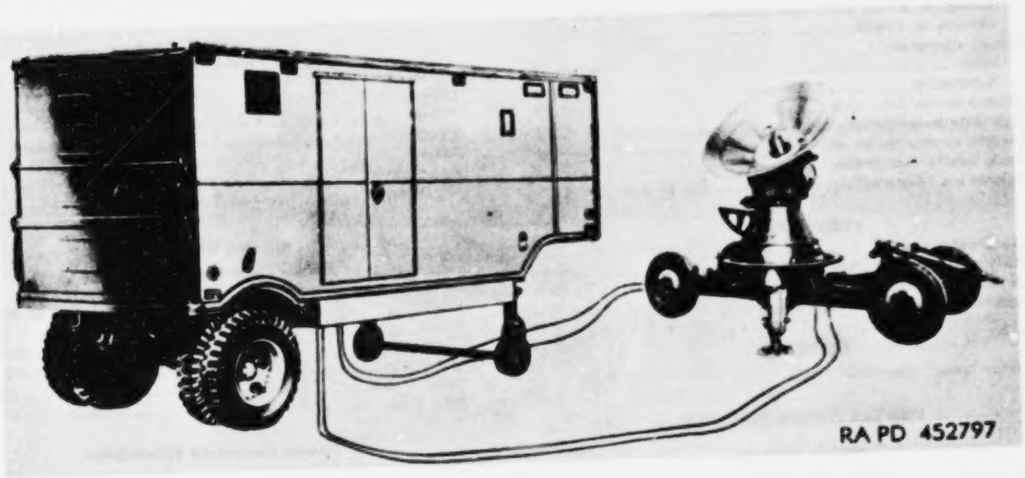
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

PRIME MOVER

Truck, 5-ton, 6 X 6.

References: SNL Y–68, TM 9–5060–12, SM 9–5–1430, 40, 50.

RADAR SET: AN/MPQ-25, W/E
(ANTENNA GROUP: OA-651/MPQ-25; RADAR SET GROUP: OA-652/MPQ-25)



Model	*Major item Line item No.*	*Federal stock No.*
OA-651/MPQ-25	4-00200-	1430-568-8188
OA-652/MPQ-25	4-33630-00	1430-568-8196

General

RADAR SET: AN/MPQ-25, w/e, consisting of ANTENNA GROUP: OA-651/MPQ-25; RADAR SET GROUP: OA-652/MPQ-25, is used for tracking the missile during flight and for sending command data to alter the missile trajectory.

ANTENNA GROUP: OA-651/MPQ-25, w/e, consisting of ANTENNA GROUP, RADAR TRACKING: OA-1177/MPQ-25; TRAILER, ANTENNA GROUP: M326,* serves as the radar tracking antenna group. The trailer XM326, a modification of the 40-mm antiaircraft gun carriage M2A1, mounts the radar tracking antenna by means of a pedestal adapter. The antenna pedestal consists of a 6-foot, dish-type reflector, a spinner motor-reference generator, and a circularly polarized antenna feed.

RADAR SET GROUP: OA-652/MPQ-25, w/e, consists of RADAR SET GROUP, ELECTRONIC COMPONENTS: ;SEMITRAILER, VAN, TRACKING STATION: M323;* and DOLLY, TRAILER CONVERTER: 8-ton, 2-wheel, K-83.* The semitrailer can be converted into a trailer by attaching the dolly or can be transported by a prime mover equipped with a suitable fifth wheel (coupler). The semitrailer M323 is equipped with four crank-operated leveling jacks and a crank-operated, manual, roll-back type landing gear. The electronic components of the radar set group are mounted in cabinets at the front, just aft of the drop, and in the extreme rear of the semitrailer. The trailer converter dolly K-83 consists of springs, wheels, hubs, and axle which are attached to the dolly frame. A semiautomatic fifth wheel (coupler) is bolted to the top of the dolly frame. A crank-operated landing gear is bolted to the rear of the dolly frame, and an adjustable drawbar is bolted to the front of the dolly frame.

Differences among models

Data plate location

The identification plate for the trailer M326 is attached to the top of the front chassis girder just aft of the front chassis swivel. The identification plate of the van of the semitrailer M323 is located on the inside of the van just to the rear of the right side door near the floor.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Antenna group:	
Weight of trailer w/radar antenna group (approx)	6,000 lb
Weight of trailer (approx)	3,300 lb
Length (overall)	18 ft
Height (overall)	9 ft
Turning diameter (min)	38 ft
Road clearance	1 ft, 2⅛ in.
Height of lunette eye	2 ft, 6 in.
Track (c/c of wheels)	4 ft, 7⅝ in.
Wheelbase	10 ft, 6 in.
Tires:	
Number	4
Ply	8
Size	6.00 x 20
Type	truck and bus, regular tread, may use mud and snow tread
Pressure (cool)	45 psi
Tubes	pneumatic, truck and bus, 6.00 x 20
Brakes, service, 4-wheel	electric
Brakes, parking, rear wheels only	mechanical
Lights	24 v
Towing facilities	drawbar w/std lunette
Radar set group:	
Weight:	
Net	9,500 lb
Payload (fixed load)	10,000 lb
Gross (operating)	19,500 lb
Length:	
Dolly	12 ft
Semitrailer	20 ft, 2¼ in.
Width:	
Dolly	7 ft, 10⅝ in.
Semitrailer	8 ft, 1½ in.
Height:	
Dolly	4 ft, 6¼ in.
Semitrailer	10 ft, 5⅜ in.
Inside semitrailer:	
Length	19 ft, 2½ in.
Width	6 ft, 4 in.
Height:	
Ahead of drop	5 ft, 2 1/16 in.
Back of drop	6 ft, 4 in.

---

* Characteristics and data will be added at a later date.

CHARACTERISTICS—Continued

Radar set group—Continued	
Floor to ground (loaded)	3 ft, 8 in.
Tread:	
Center to center (dolly and semitrailer)	6 ft, ¼ in.
Outside to outside	7 ft, 10⅝ in.
Ground clearance:	
Dolly	1 ft, 4⅝ in.
Semitrailer	1 ft, 5½ in.
Lunette eye to dolly axle	8 ft, 5⅝ in.
Dolly axle to semitrailer axle	15 ft, 6¼ in.
Kingpin to semitrailer axle	16 ft, 1½ in.
Pintle height (semitrailer)	2 ft, 8½ in.
Lunette eye (adjustable)	2 ft, 8⅝ in. and 3 ft, 4½ in.

PERFORMANCE

Antenna group:	
Maximum slope on which trailer can be leveled	5 deg
Diameter of circle of emplacement over trailer	18 ft
Diameter of circle of emplacement over outriggers	13 ft

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-50, ORD 7 SNL Y-58.

INSTRUCTIONAL MATERIAL

PRIME MOVER

Antenna group	
Radar set group	5-ton, 4 x 4, tractor-truck

STORAGE AND SHIPMENT DATA

ANTENNA GROUP: OA-651/MPQ-25:

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	496.8 cu ft
Gross weight	64,820 lb
Ship tons	1.24

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

RADAR SET GROUP: OA-652/MPQ-25:

Within Continental United States

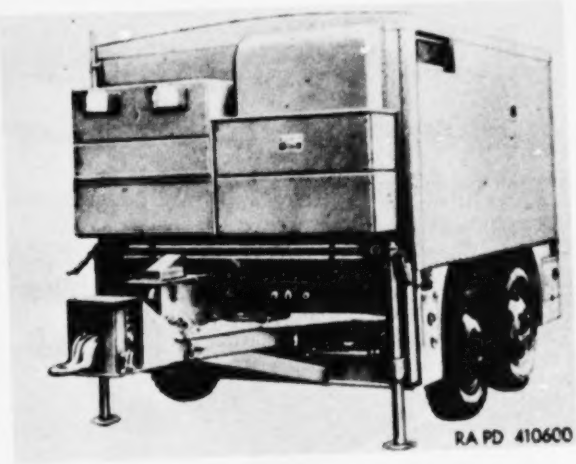
Shipped	
Length	20 ft, 5½ in.
Width	7 ft, 1 in.
Height	10 ft, 5 in.
Volume	2,315.5 cu ft
Gross weight	19,100 lb
Ship tons	57.9

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:
Antenna group: SNL Y-58, TM 9-5066, TM 9-5066-12.
Radar set group: SNL Y-50, TM 9-5068.

RADIO SET (DOPPLER STATION): AN/MRQ–7



Model	*Major item Line item No.*	*Federal stock No.*
AN/MRQ–7	4–33635–00	1430–568–8197

General

RADIO SET: AN/MRQ–7 calculates the radial velocity of the missile to determine the propellant shutoff time and the amount of range correction required. It transmits the propellant shutoff signal and a warhead-arming signal to the missile. It consists of a transmitting system, a receiving system, an audio system, a power supply system, an air-conditioning sytem, a communications system, test and calibration equipment, antennas, cable, and van trailer XM324.*

Differences among models

Data plate location

The trailer identification plate is mounted above the drawbar on the right front of the trailer.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight (gross)	8,900 lb
Length	16 ft, 1⅞ in.
Width	8 ft, 0 in.
Height	8 ft, 1 in.
Tread (c/c)	6 ft, 11¾ in.
Ground clearance	9¼ in.
Floor to ground	1 ft, 3¼ in.
Floor area occupied	125.9 sq ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–52.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	16 ft, 2 in.
Width	7 ft
Height	7 ft, 11 in.
Volume	1,153.2 cu ft
Gross weight	10,300 lb
Ship tons	28.8

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y–52, TM 9–5070, (CM) TM 9–5044–10.

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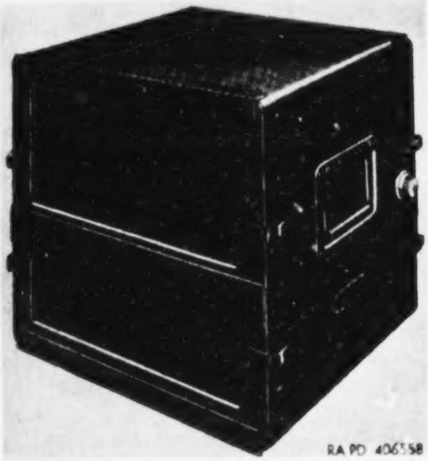
* For characteristics and data, see item in section

SELECTOR, LAUNCHER CONTROL: AN/GSW–3

(Data to be published at a later date.)



RA PD 406558

Model	*Major item Line item No.*	*Federal stock No.*
AN/GSW-3	4–38800–00	1440–568–8198

General

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight
Length
Width
Height

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y–54.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

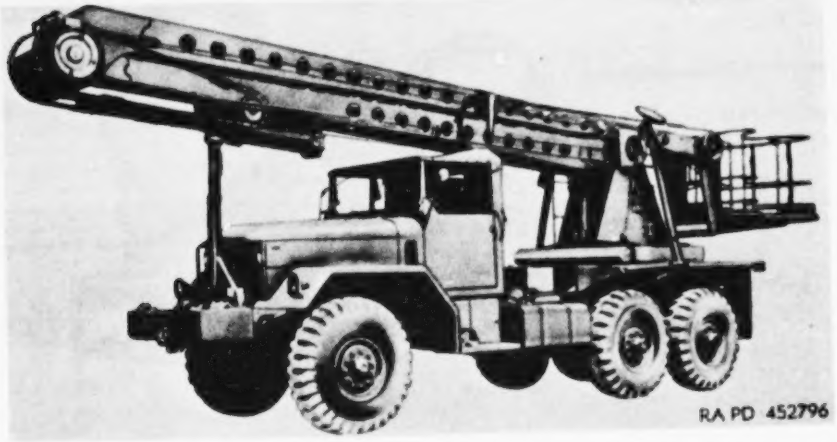
Shipped	
Length	
Width	
Height	
Volume	505 cu ft
Gross weight	128 lb
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y 54.

SERVICING PLATFORM, TRUCK MOUNTED: M280, M280E1, W/E


RA PD 452796

Model	*Major item Line item No.*	*Federal stock No.*
M280	4-39125-00	1450-568-8199
M280E1		

General

SERVICING PLATFORM, TRUCK MOUNTED: M280 and M280E1, w/e, is a truck-mounted servicing vehicle for use with the GUIDED MISSILE, ARTILLERY: M2 and M2A1.* The truck-mounted servicing platform M280 consists mainly of the servicing platform and a CHASSIS, TRUCK: 5-ton, 6 x 6, M39* (with body removed). The serving platform consists of structural and mechanical components, hydraulic system, intercommunication system, and lighting system. The structural and mechanical components consist of the servicing platform deck, outriggers, speed decreaser (reduction)-gearbox, azimuth-control platform, lower boom, upper boom, maintenance platform, elevating assembly, safety device, and maintenance platform leveling assembly.

Differences among models

The maximum lifting capacity of the M280 is 400 pounds. The maximum lifting capacity of the M280E1 is 600 pounds. The servicing platform M280's lockpin is raised for road travel and lowered for operation of the platform, while the M280E1 uses a shifting lever to operate the platform and to lock it in position for road travel. Other differences are covered under "CHARACTERISTICS" below.

Data plate location

The identification plate for the servicing platform M280E1 is located on the left-rear corner of the servicing platform, while the M280's identification plate is located on the right side of the azimuth weldment above the control valve.

Classification

M280	Limited Standard (OTCM 36374)
M280E1	

CHARACTERISTICS

Weight (excluding truck):	
M280	7,638 lb
M280E1	9,700 lb
Height (overall, from ground):	
M280	
M280E1	11 ft
Height (overall, from ground)—Continued	
Booms extended:	
M280	57 ft
M280E1	56 ft, 6 in.
Booms lowered (normal traveling position):	
M280	11 ft, 8 in.
M280E1	12 ft, 6 in.
Booms lowered (lower traveling position):	
M280	
M280E1	11 ft
Length (overall, booms folded in traveling position):	
M280	35 ft
M280E1	35 ft, 9 in.
Width (overall, outriggers retracted):	
M280	7 ft, 9 in.
M280E1	
Lifting capacity:	
M280	400 lb
M280E1	600 lb
Safety factor:	
M280	5 to 1
M280E1	3 to 1
Maintenance platform:	
Length (overall):	
M280	5 ft, 7⅝ in.
M280E1	6 ft, 1 in.
Width:	
Narrowest point:	
M280	1 ft, 5½ in.
M280E1	1 ft, 6 in.
Widest point:	
M280	3 ft, 9 in.
M280E1	5 ft, 4½ in.
Height:	
Upper railing (from floor):	
M280	3 ft, 5 in.
M280E1	3 ft, 6 in.
Center railing (from floor):	
M280	1 ft, 5 in.
M280E1	1 ft, 6 in.
Lower railing (from floor):	
M280	5 in.
M280E1	5½ in.

---

* For characteristics and data, see item in section 21 and page 19-151.

PERFORMANCE

Rotation (M280 and M280E1) .... 360 deg

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-67.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

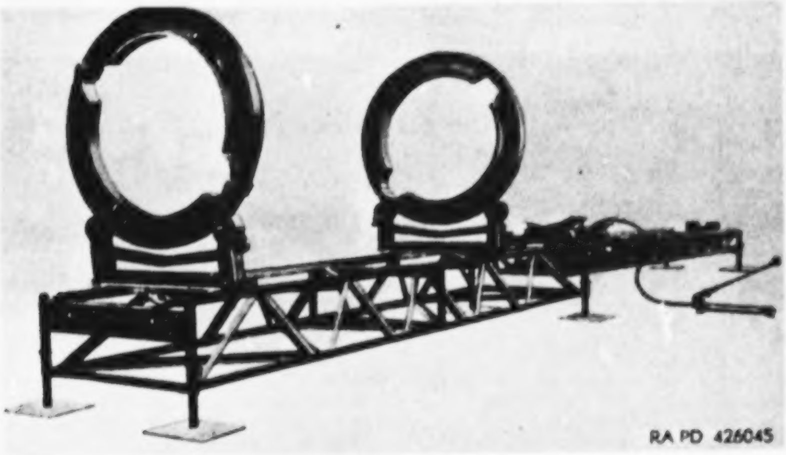
Shipped	
Length	35 ft, 9 in.
Width	8 ft
Height	12 ft, 6 in.
Volume	3,150.0 cu ft
Gross weight	27,550.0 lb
Ship tons	78.8

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-67, TM 9—5058-12, TM 9-5058-35.

TRACK, SHIPPING CONTAINER AND HANDLING MISSILE: M1, W/E


RA PD 426045

Model	*Major item Line item No.*	*Federal stock No*
M1	4-56675-00	1450-521-9845

General

TRACK, SHIPPING CONTAINER AND HANDLING MISSILE: M1, w/e, is used to remove the missile body aft section from the metal container. The handling rings engage the missile to provide 360 degrees rotation about the longitudinal axis of the supported missile body for checkout purposes.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Weight	
Length	
Width	
Height	

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-62.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

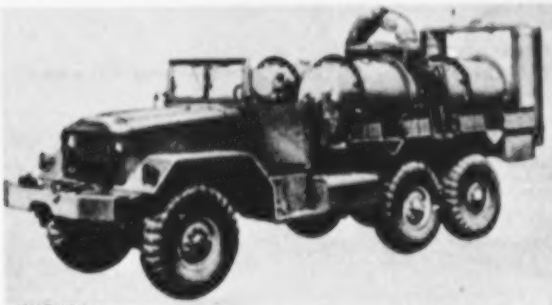
Shipped	
Length	15 ft, 3 in.
Width	3 ft, 3½ in.
Height	2 ft, 7⅝ in.
Volume	136.7 cu ft
Gross weight	1,600 lb
Ship tons	3.4

Outside Continental United States

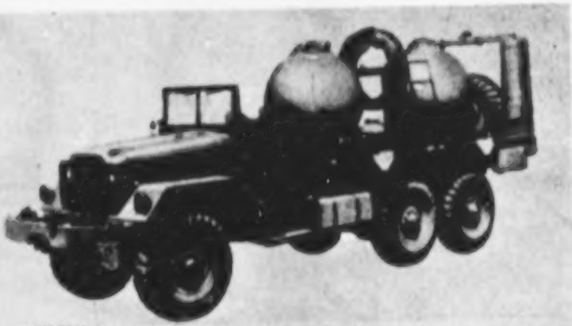
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-62.

TRUCK, PROPELLANT SERVICING, GUIDED MISSILE: X-M268 OR M268 (XM268E1) W/PROPELLANT SERVICING KIT, GUIDED MISSILE: FUEL (ORD NO. 8028200) OR W/PROPELLANT SERVICING KIT, GUIDED MISSILE: OXIDIZER (ORD NO. 8028199)



SHOWN:
TRUCK, PROPELLANT SERVICING, GUIDED MISSILE M268 (XM 268E1), W/PROPELLANT SERVICING KIT, GUIDED MISSILE FUEL



SHOWN:
TRUCK, PROPELLANT SERVICING, GUIDED MISSILE M268 (XM 268E1), W/PROPELLANT SERVICING KIT, GUIDED MISSILE OXIDIZER

ORD A1403

Major Item

Model	*Line item No.*	*Federal stock No.*
M268 (XM268E1)	4-61260-10	1450-568-8204
X-M268	4-61260-10	1450-532-6107
FUEL (ORD NO. 8028200)	4-31212-10	1450-573-5644
OXIDIZER (ORD NO. 8028199)		1450-573-5643

General

TRUCK, PROPELLANT SERVICING, GUIDED MISSILE: X-M268 OR M268 (XM268E1) W/PROPELLANT SERVICING KIT, GUIDED MISSILE: FUEL (ORD NO. 8028200) OR W/PROPELLANT SERVICING KIT, GUIDED MISSILE: OXIDIZER (ORD NO. 8028199) is used for transporting fuel or oxidizer and for filling the missile fuel or oxidizer tank. The propellant servicing truck consists of the propellant handling body and the CHASSIS, TRUCK: 5-ton, 6 x 6, M39.* The propellant handling body is adaptable for use with either the fuel kit or the oxidizer kit. Either type of kit consists mainly of tanks, hose assembly, and aprons.

Differences among models

Data plate location

The propellant servicing truck identification plate is located to the left of the spare tire well. The fuel tank identification plate is located on one of the stiffener rings on each fuel tank. The oxidizer tank identification plate is located on the stiffener on top of each oxidizer tank.

Classification:

X-M268	
M268 (XM268E1)	Standard B (OTCM 36841)

CHARACTERISTICS

Propellant servicing truck, X-M268:	
Weight (gross)	
Weight w/four fuel tanks, empty	
Weight w/four fuel tanks, full	
Weight w/two oxidizer tanks, empty	
Weight w/two oxidizer tanks, full	
Length	
Height	
Width	
Propellant servicing truck, M268 (XM268E1):	
Weight (gross)	22,560 lb
Weight w/four fuel tanks, empty	24,220 lb
Weight w/four fuel tanks, full	32,792 ±40 lb
Weight w/two oxidizer tanks, empty	23,632 lb
Weight w/two oxidizer tanks, full	32,478 ±20 lb
Length	27 ft, 6 in.
Height	10 ft, 10 in.
Width	
Propellant handling body:	
Weight	5,020 lb
Length	16 ft, 1⅝ in.
Height	7 ft
Width	7 ft, 10⅝ in.
Decontamination tank (cap.)	50 gal
Fuel tank:	
Weight, empty	415 lb
Weight, full	2,558 ±10 lb
Capacity	242 gal
Capacity	2,143 ±10 lb
Oxidizer tank:	
Weight, empty	536 lb
Weight, full	4,959 ±10 lb
Capacity	344 gal
Capacity	4,423 ±10 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL Y-64, ORD 7 SNL J-739, Sec. 25, and ORD 7 SNL J-739, Sec. 24

INSTRUCTIONAL MATERIAL

Graphic Training Aid: 9-25 (chassis M39).

STORAGE AND SHIPMENT DATA

X-M268:

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

---

*For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA—Continued

M268 (XM268E1):

Within Continental United States

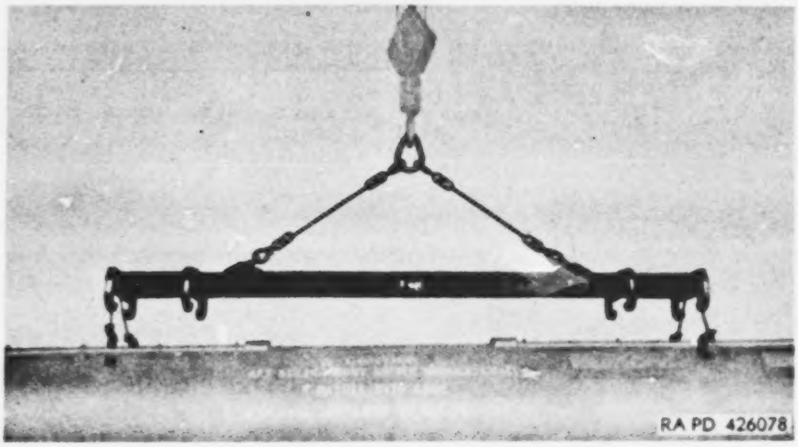
Shipped	
Length	27 ft
Width	7 ft, 10⅛ in.
Height	10 ft, 10 in.
Volume	2,291.0 cu ft
Gross weight	24,240.0 lb
Ship tons	57.3

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:
SNL J-739, Sec. 24; SNL J-739, Sec. 25; SNL Y-64; TM 9-5050, TM 9-5056-12.

BEAM, HANDLING, MISSILE CONTAINER: M5



RA PD 426078

Major item

Model	*Line item No.*	*Federal stock No.*
M5	4-01108-10	1450-699-8694

General

Differences among models

Data plate location

Classification: Limited Standard (OTCM 36374).

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 beam per container.

Length	166 in.
Width	28 in.
Height	15 in.
Volume	40 cu ft
Gross weight	770 lb
Ship tons	1.00

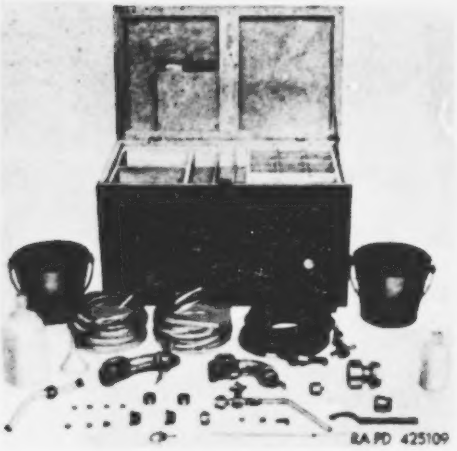
Outside Continental United States

Shipped 1 beam per container.

Length	166 in.
Width	28 in.
Height	15 in.
Volume	40 cu ft
Gross weight	770 lb
Ship tons	1.00

References: SNL Y-98.

DECONTAMINATION KIT, GUIDED MISSILE: M74



RA PD 425109

Major item

Model	***Line item No.***	***Federal stock No.***
	4-11736-10	1450-337-9021

General

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 3 units per pack.

Crate No. 1:	
Length	48 in.
Width	26 in.
Height	55⅛ in.
Volume	40 cu ft
Gross weight	300 lb
Ship tons	1.00
Chest No. 1:	
Length	39⅝ in.
Width	24⅛ in.
Height	23⅛ in.
Volume	13 cu ft
Gross weight	150 lb
Ship tons	0.33
Box No. 1:	
Length	57 in.
Width	17⅛ in.
Height	13⅛ in.
Volume	8 cu ft
Gross weight	100 lb
Ship tons	0.2

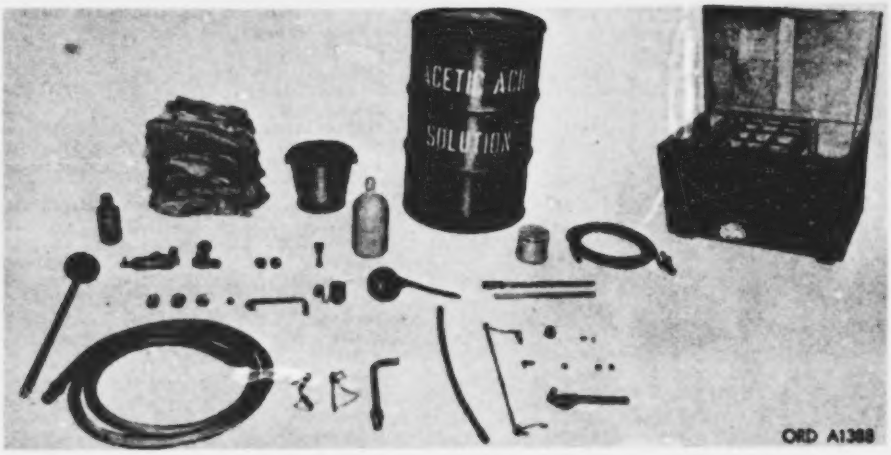
Outside Continental United States

Shipped 3 units per pack.

Crate No. 1:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Chest No. 1:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Box No. 1:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-74.

DRAINING KIT, FUEL, GUIDED MISSILE: M72



ORD A1388

Major item

Model	*Line item No.*	*Federal stock No.*
M72	4-12679-10	1450-337-9016

General

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 units per pack.

Box No. 1:	
Length	37½ in.
Width	21 in.
Height	20 in.
Volume	9.10 cu ft
Gross weight	150 lb
Ship tons	0.23

Chest No. 1:	
Length	39⅝ in.
Width	23⅛ in.
Height	24⅛ in.
Volume	12.90 cu ft
Gross weight	150 lb
Ship tons	0.33

Outside Continental United States

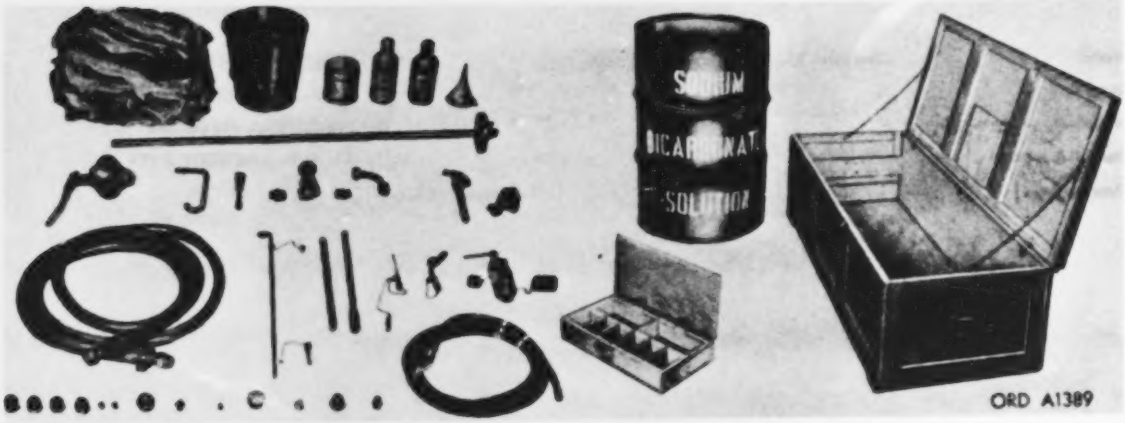
Shipped 2 units per pack.

Box No. 1:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Chest No. 1:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-72.

DRAINING KIT, OXIDIZER, GUIDED MISSILE: M73



ORD A1389

Major item

Model	*Line item No.*	*Federal stock No.*
	4-12685-10	1450-337-9019

General

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 2 units per pack.

Crate No. 1:

Length	57 in.
Width	21 in.
Height	14 in.
Volume	9.70 cu ft
Gross weight	150 lb
Ship tons	0.24

Chest No. 1:

Length	59⅛ in.
Width	23⅛ in.
Height	16⅛ in.
Volume	12.70 cu ft
Gross weight	150 lb
Ship tons	0.32

Outside Continental United States

Shipped 2 units per pack.

Crate No. 1:

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Chest No. 1:

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL Y-73

ELECTRONIC SHOP, TRUCK MOUNTED: AN/MPM-38 (SET A)

(Data to be published at a later date)

Model	*Line item No.*	*Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

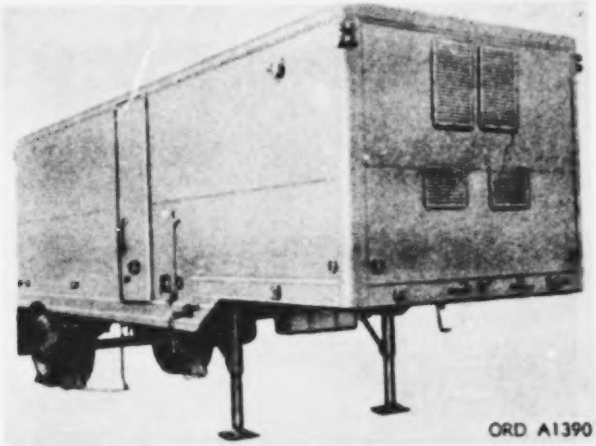
EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: SNL J-739, Sec. 26.

ELECTRONIC SHOP, SEMITRAILER MOUNTED: AN/MSM-45 (SET C) (SEMITRAILER AN/MSM-23, SET A; SEMITRAILER AN/MSM-24, SET B)



ORD A1390

	Secondary item	
Model	***Line item No.***	***Federal stock No.***
	9-41575 (Temp.)	4935-621-5271

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

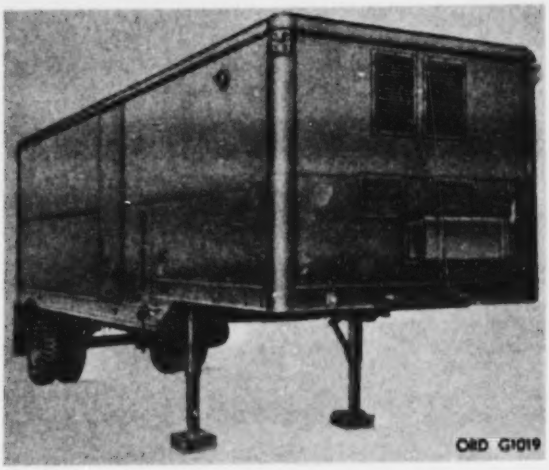
INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References:
SNL J-739, Sec. 26; TM 9-9505-1-30, TM 9-9505-1-50, TM 9-9505-2-30.

ELECTRONIC SHOP, SEMITRAILER MOUNTED: AN/MSM-46 (SET D) (SEMITRAILER AN/MSM-21; SEMITRAILER AN/MSM-26)

(Data to be published at a later date.)



Model	*Line item No.*	*Federal stock No.*
	9-41577	4935-622-9416

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

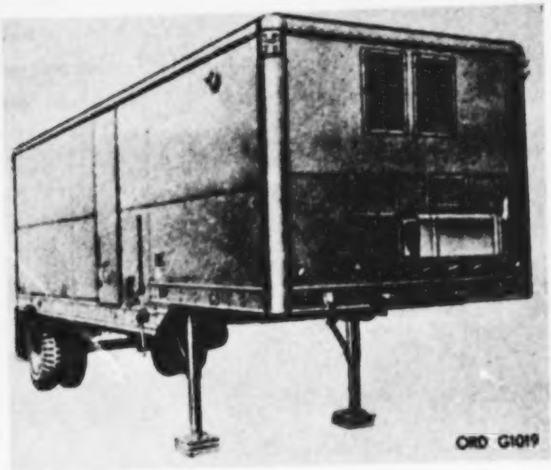
INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: SNL J-739, Sec. 29; TM 9-9510-1-45, TM 9-9510-2-45.

SHOP EQUIPMENT SET, GUIDED MISSILE-GROUND HANDLING-SERVICING, SEMITRAILER MOUNTED: SET B (SEMITRAILER XM499; SEMITRAILER XM500)

(Data to be published at a later date.)



Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: SNL J-739, Sec. 30, TM 9-9513-40, TM 9-9513-45.

SHOP SET, GUIDED MISSILE, FIELD MAINTENANCE: SET A

(Data to be published at a later date.)

Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

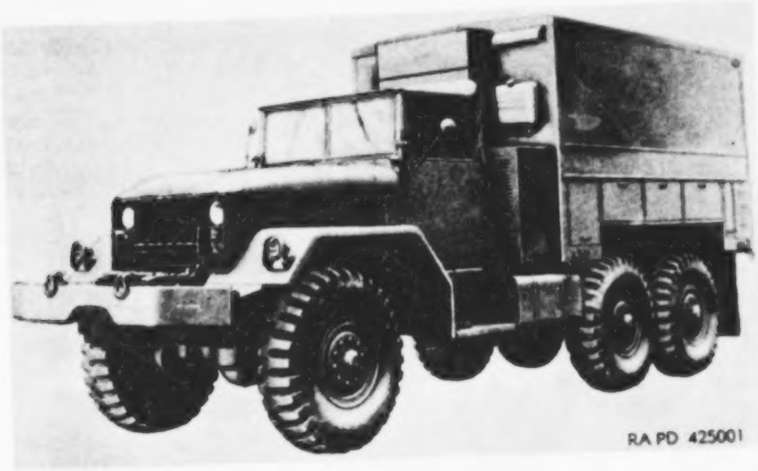
INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: SNL J-739, Sec. 30; TM 9-9514-40, TM 9-9514-45.

TEST STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSM-4

(Data to be published at a later date.)



RA PD 425001

Model	*Line item No.*	*Federal stock No.*
AN/MSM-4, w/e		4935-568-8195

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

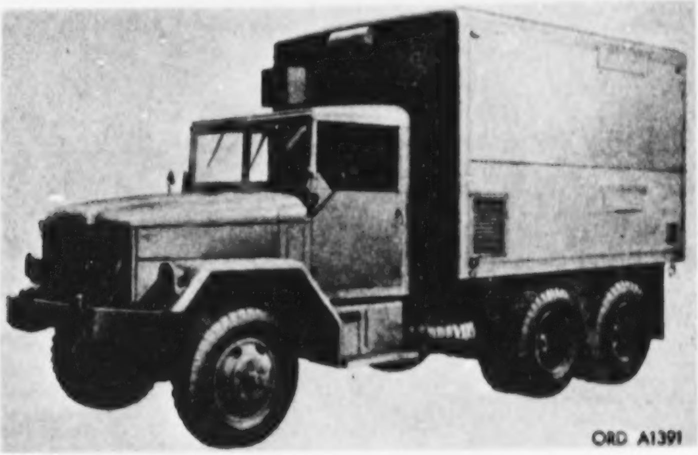
INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: SNL Y-56.

TEST STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSM-12

(Data to be published at a later date.)



ORD A1391

Model	*Line item No.*	*Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

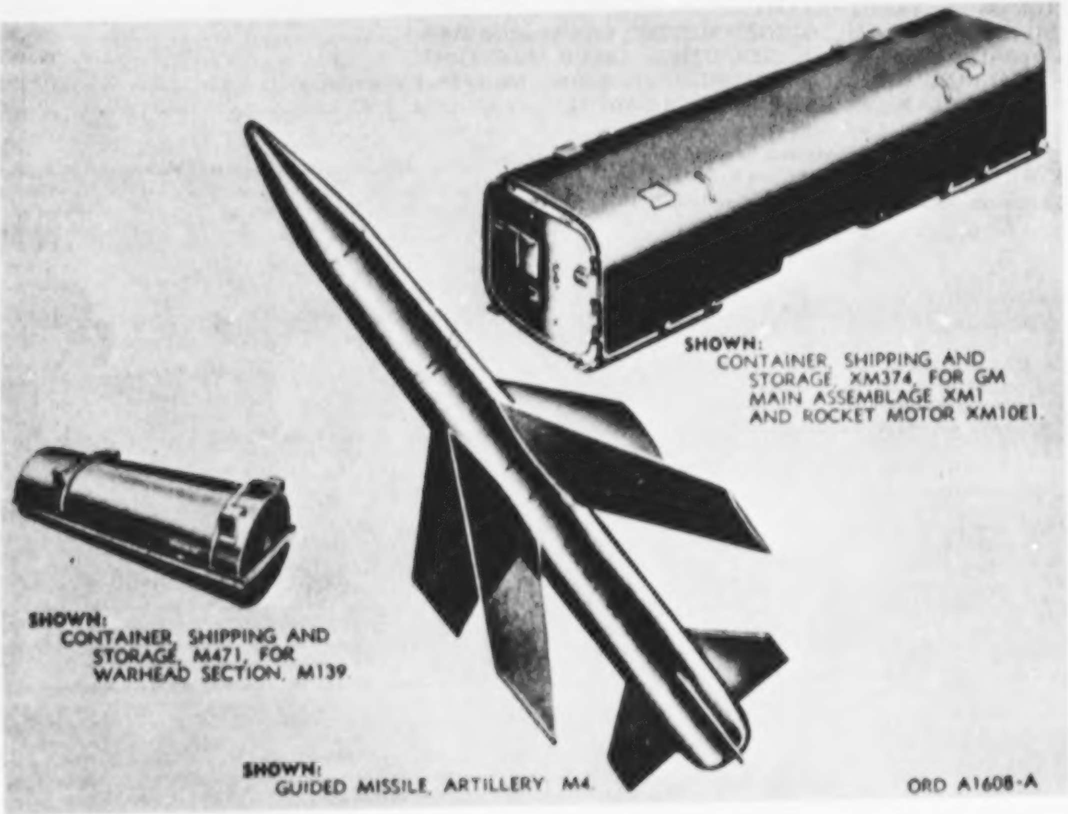
References: SNL J-739, Sec 27; TM 9-9508-1-30, TM 9-9508-2-30, TM 9-9508-1-50A.

ARTILLERY GUIDED MISSILE SYSTEM—LACROSSE

Page
GUIDED MISSILE, ARTILLERY: M4 19-184
LAUNCHER, HELICAL RAIL, GUIDED MISSILE: truck mounted M398 19-186
MISSILE GUIDANCE CENTRAL, COMPUTING, TRUCK MOUNTING 19-187
TARGET RANGING SET, GUIDED MISSILE: w/installation frame, truck mounting 19-191
TRACKER, ANGULAR, GUIDED MISSILE: MX-3029/M, truck mounting, w/e 19-189

TRUCK, CARGO: 5-ton, 6 x 6, M55
(For characteristics and data, see item in section 21.)
TRUCK WRECKER: crane, 2½-ton, 6 x 6, M108
(For characteristics and data, see item in section 21.)

GUIDED MISSILE, ARTILLERY: M4


SHOWN:
CONTAINER, SHIPPING AND STORAGE, XM374, FOR GM MAIN ASSEMBLAGE XM1 AND ROCKET MOTOR XM10E1.
SHOWN:
CONTAINER, SHIPPING AND STORAGE, M471, FOR WARHEAD SECTION, M139
SHOWN:
GUIDED MISSILE, ARTILLERY M4.
ORD A1608-A

Model	*Line item No.*	*Federal stock No.*
M4		1410-624-4326

General

GUIDED MISSILE, ARTILLERY: M4, provides general support in precision and area fire against tragets such as pillboxes, blockhouses, or similarly constructed fortifications. It is also used for supporting fire on such targets as enemy troops, materiel, installations, and supply lines. The missile M4 is delivered to the assembly area in two separate containers: a metal, reusable CONTAINER, SHIPPING AND STORAGE, M471, FOR WARHEAD SECTION: M139 and a metal, reusable, CONTAINER, SHIPPING AND STORAGE, XM374, FOR MAIN ASSEMBLAGE, XM1 AND ROCKET MOTOR: XM10E1. The missile M4 consists of the warhead section, lock ring, pitot tube, wings, fins, tailcone, rocket motor section, beacon antennas, guidance and power section, and transponder antennas.

Differences among models

Data plate location

Classification: Limited production (OTCM 37547).

CHARACTERISTICS

GUIDED MISSILE MAIN ASSEMBLAGE: XM1 (less rocket motor):

Weight	988 lb
Length	12 ft, 7 9/16 in.
Diameter	1 ft, 8½ in.

CONTAINER, SHIPPING AND STORAGE, XM374, GUIDED MISSILE MAIN ASSEMBLAGE XM1 AND ROCKET MOTOR XM10E1:

Weight	1,525 lb
Length	15 ft, 2 in.
Width	3 ft, 5 in.
Depth	3 ft, 9 in.

Container, shipping and storage, M471 for warhead section M139:

Weight	650 lb
Length	8 ft
Width	3 ft
Depth	3 ft, 3 in.

Fin (span, tip to tip):

Weight	14 lb
Length	4 ft, 8⅝ in.

Missile (complete):

Weight	2,300 lb
Length	19 ft, 2 in.
Diameter	1 ft, 8½ in.

Motor, rocket:

Weight	832 lb
Length	8 ft, 6 in.
Diameter	1 ft, 4 in.

CHARACTERISTICS—Continued

WARHEAD SECTION, GUIDED MISSILE, HIGH-EXPLOSIVE: M139 (T34E2):

Weight	540 lb
Length	6 ft, 7⅝ in.
Diameter	1 ft, 8½ in.
Wing (span, tip to tip):	
Weight	57.5 lb
Length	9 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–1410–400–12.

INSTRUCTIONAL MATERIAL

WARHEAD SECTION, GUIDED MISSILE, PRACTICE: M81
TRAINER, GUIDED MISSILE: M33
TRAINING-SET, GUIDED MISSILE: M50
TRAINER, GUIDED MISSILE MAIN ASSEMBLAGE:—

STORAGE AND SHIPMENT DATA

WARHEAD SECTION, M139 (T34E2) GUIDED MISSILE HIGH EXPLOSIVE:

Within Continental United States

Shipped 1 warhead section per metal container.

Length	8 ft
Width	3 ft
Height	3 ft, 3 in.
Volume	78 cu ft
Gross weight	1,200 lb
Ship tons	1.95

Outside Continental United States

Shipped 1 warhead section per metal container.

Length	8 ft
Width	3 ft
Height	3 ft, 3 in.
Volume	78 cu ft
Gross wieght	1,200 lb
Ship tons	1.95

GUIDED MISSILE MAIN ASSEMBLAGE: XM1 W/ROCKET MOTOR, XM10E1:

Within Continental United States

Shipped 1 main assemblage w/motor per metal container.

Length	15 ft, 2 in.
Width	3 ft, 5 in.
Height	3 ft, 9 in.
Volume	174.9 cu ft
Gross weight	3,497 lb
Ship tons	

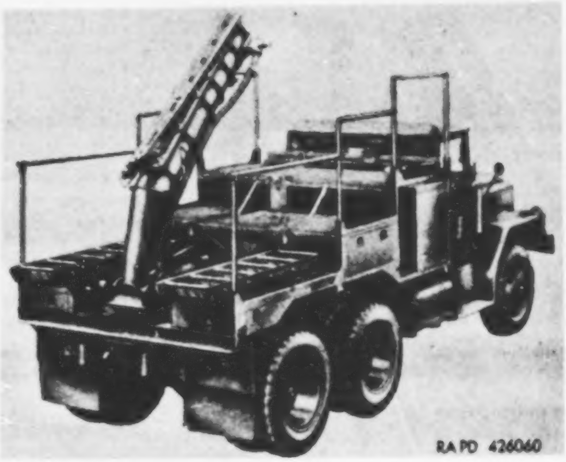
Outside Continental United States

Shipped 1 main assemblage w/motor per metal container.

Length	15 ft
Width	3 ft, 5 in.
Height	3 ft, 9 in.
Volume	174.9 cu ft
Gross weight	3,497 lb
Ship tons	4.3

References: TM 9–1410–400–10, TM 9–1410–400–12, TM 9–1410–34, TM 9–1410–400–34/2.

LAUNCHER, HELICAL RAIL, GUIDED MISSILE: TRUCK MOUNTED, M398



Model	*Line item No.*	*Federal stock No.*
M398	4–20762–10	1440–611–0812

General

LAUNCHER, HELICAL RAIL, GUIDED MISSILE: truck mounted M398, is an assembly platform, transports the assembled missile, and supports the missile during laying and firing. The launcher is mounted on a 2½-ton, 6 x 6 truck chassis M45.* It consists of a work platform, launcher rail and tube assembly, sighting and laying equipment, storage compartments, hydraulic system, electrical system, and truck chassis M45. The launcher M398 can also be adapted so that the entire vehicle can be transported by air in certain cargo planes.

Differences among models

Data plate location

Classification: Standard B (OTCM 37828).

CHARACTERISTICS

Weight	16,000 lb
Length	21 ft, 11 in.
Width	7 ft, 10 in
Height	9 ft, 8 in

PERFORMANCE

Speed (continuous) on:	
Gravel and Belgian block type road	20 mph
Radial washboard and cross-country road	15 mph
6-inch washboard road	5 mph

*For characteristics and data, see item in section 21.

EQUIPMENT

Basic Issue Items: See TM 9–1440–400–12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

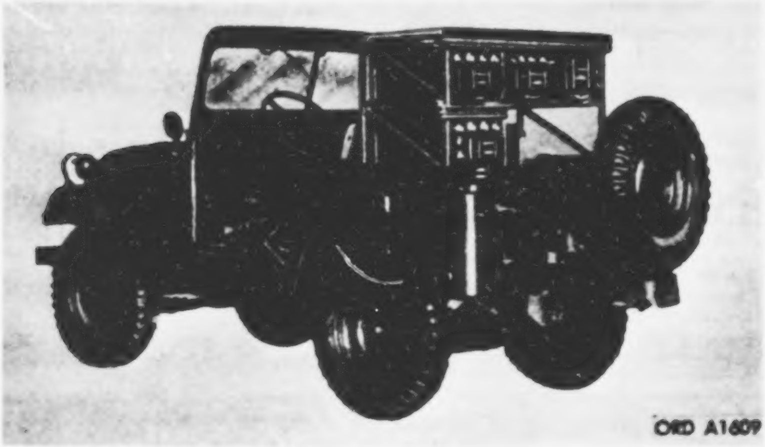
Shipped	
Length	21 ft, 11 in.
Width	7 ft, 9 in.
Height	8 ft, 5 in.
Volume	1,424 cu ft
Gross weight	15,250 lb
Ship tons	35.6

Outside Continental United States

Shipped	
Length	21 ft, 11 in.
Width	7 ft, 9 in.
Height	8 ft, 5 in.
Volume	1,424 cu ft
Gross weight	15,250 lb
Ship tons	35.6

References: TM 9–1440–400–12, TM 9–1440–400–34, SM 9–5–1430, 40, 50.

MISSILE GUIDANCE CENTRAL, COMPUTING, TRUCK MOUNTING



Major item		
Model	***Line item No.***	***Federal stock No.***
		1430-799-8474

General

MISSILE GUIDANCE CENTRAL, COMPUTING, TRUCK MOUNTING: w/e, consists of the electrical cable assembly set, missile guidance computer, range indicator, interrogator set, power supply, electrical equipment rack, TRAILER, AMPHIBIOUS: cargo, ¼-ton, 2-wheel, M100,* and TRUCK, UTILITY: ¼-ton, 4 x 4, M38A1E2.** Missile guidance central group is one of two parts, the other part, TRACKER, ANGULAR, GUIDED MISSILE: MX-3029/M, truck mounting of the MISSILE GUIDANCE CENTRAL, AN/MSW-5** whose purpose is to search for, and acquire, the missile beacon signal, accurately track and maintain positive control over the missile directional path; and deliver the missile, armed, to the target.

Differences among models

Data plate location

Classification: Standard B (OTCM 37828).

CHARACTERISTICS

Weight:	
Electrical cable assembly set:	
Angular tracker to computer	13 lb
Angular tracker to electronic power supply	13 lb
Generator set to electronic power supply	5 lb
Interrogator set antenna (2)	9 lb
Main cable harness	16 lb
Remote control unit	5 lb
Cable reel (2)	11 lb
Electronic power supply	49.5 lb
Guidance computer	45.5 lb
Range indicator	46 lb
Interrogator set	49.5 lb
Dimensions:	
Electrical cable assembly set:	
Angular tracker to computer	50 ft
Angular tracker to electronic power supply	50 ft
Generator set to electronic power supply	25 ft
Interrogator set antenna (2)	50 ft
Main cable harness	8 ft
Remote control unit	50 ft
Cable reel (2)	$19\frac{1}{2}$ in.
Electronic power supply:	
Length	1 ft. $8\frac{5}{8}$ in.
Height	$9\frac{5}{8}$ in.
Width	1 ft. $1\frac{1}{8}$ in.
Guidance computer:	
Length	1 ft. $9\frac{5}{8}$ in.
Height	$9\frac{11}{16}$ in.
Width	1 ft. $1\frac{5}{8}$ in.
Interrogator set:	
Length	1 ft. $8\frac{5}{8}$ in.
Height	$9\frac{11}{16}$ in.
Width	1 ft. $1\frac{5}{8}$ in.
Range indicator:	
Length	1 ft. $8\frac{5}{8}$ in.
Height	$9\frac{11}{16}$ in.
Width	1 ft. $1\frac{5}{8}$ in.
Volume:	
Electrical cable assembly set:	
Cable reel (2)	4.8 cu ft
Electronic power supply	1.5 cu ft
Guidance computer	1.5 cu ft
Range indicator	1.5 cu ft
Interrogator set	1.5 cu ft

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: See TM 9-1430-400-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Electrical cable assembly set:	
Length	2 ft. $\frac{7}{8}$ in.
Width	1 ft. $4\frac{5}{8}$ in.
Height	1 ft. $4\frac{1}{8}$ in.
Volume	4.00 cu ft
Gross weight	69.00 lb
Ship tons	0.10

---

*For characteristics and data, see item in section 22 and on page 19-189.

**Characteristics and data will be added at a later date.

STORAGE AND SHIPMENT DATA—Continued

Within Continental United States—Continued

Shipped—Continued

Missile Guidance Computer, CP-453/MSW-5:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	71.00 lb
Ship tons	0.08

Range indicator, IP-478/T:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	68.00 lb
Ship tons	0.08

Interrogator set, AU/TP X-29:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	70.00 lb
Ship tons	0.08

Power supply, PP-2149/T:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	69.00 lb
Ship tons	0.08

Electrical equipment rack:

Length	4 ft, 8½ in.
Width	2 ft, 6¾ in.
Height	2 ft, 6½ in.
Volume	30.00 cu ft
Gross weight	133.00 lb
Ship tons	0.75

Outside Continental United States

Shipped

Electrical cable assembly set:

Length	2 ft, ⅛ in.
Width	1 ft, 4⅝ in.
Height	1 ft, 4½ in.
Volume	4.00 cu ft
Gross weight	69.00 lb
Ship tons	0.10

Missile guidance computer, CP-453/MSW-5:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	71.00 lb
Ship tons	0.08

Range indicator, IP-478/T:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	68.00 lb
Ship tons	0.08

Interrogator set, AU/TPX-29:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	70.00 lb
Ship tons	0.08

Power supply, PP-2149/T:

Length	2 ft, ½ in.
Width	1 ft, 5¾ in.
Height	1 ft, 1½ in.
Volume	3.25 cu ft
Gross weight	69.00 lb
Ship tons	0.08

Electrical equipment rack:

Length	4 ft, 8½ in.
Width	2 ft, 6¾ in.
Height	2 ft, 6½ in.
Volume	30.00 cu ft
Gross weight	133.00 lb
Ship tons	0.75

References: TM 9-1430-400-12, TM 9-1430-400-20P/1, SM 9-5-1430.40.50.

TRACKER, ANGULAR, GUIDED MISSILE: MX-3029/M, truck mounting, w/e

RA PD 426292

Major item

Model	*Line item No.*	*Federal stock No.*
MX-3029/M	4-56705-10	1430-799-8476

General

TRACKER, ANGULAR, GUIDED MISSILE: MX-3029/M, truck mounting, w/e, consists of the guided missile angular tracker, gasoline engine generator set, battery charger, missile tracking antenna calibration test set, frequency calibrator set, missile guidance equipment installation frame, and TRUCK, CARGO: ¾-ton, 4 x 4, M37* guided missile angular tracker. MX-3029/M is one of two parts, the other part, MISSILE GUIDANCE CENTRAL, COMPUTING, TRUCK MOUNTING** of the MISSILE GUIDANCE CENTRAL, AN/MSW-5** whose purpose is to search for, and acquire, the missile beacon signal, accurately track and maintain positive control over the missile directional path, and deliver the missile, armed, to the target.

Differences among models

Data plate location

Classification: Standard B (OTCM 37828)

CHARACTERISTICS

Angular tracker:	
Antenna assembly:	
Weight	54 lb
Depth	1 ft, 8½ in
Height	2 ft, 1 in
Width	1 ft, 10⅞ in
Volume	6.7 cu ft
Receiver assembly:	
Weight	74 lb
Depth	1 ft, 10½ in
Height	1 ft, 3 in
Width	1 ft, ¼ in
Volume	4.55 cu ft
Generator set:	
Weight (with fuel)	122 lb
Depth	1 ft, 7⅝ in
Height	1 ft, 9½ in
Width	1 ft, 11⅝ in
Volume	5.8 cu ft

---

*For characteristics and data, see item in section 21 and on page 19-187.

**Characteristics and data will be added at a later date.

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: See TM 9-1430-400-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped:	
Angular tracker:	
Length	4 ft, 1¾ in.
Width	2 ft, 6¼ in.
Height	2 ft, 6¾ in.
Volume	27.00 cu ft
Gross weight	210.00 lb
Ship tons	0.67
Installation frame:	
Length	4 ft, 2¾ in.
Width	2 ft, 5¼ in.
Height	2 ft, 3¼ in.
Volume	23.00 cu ft
Gross weight	105.00 lb
Ship tons	0.60
Missile tracking antenna calibration test set:	
Length	1 ft, 11½ in.
Width	1 ft, 10¾ in.
Height	1 ft, 7¾ in.
Volume	6.00 cu ft
Gross weight	118.00 lb
Ship tons	0.15
Generator set:	
Length	1 ft, 2¾ in.
Width	1 ft, 7⅜ in.
Height	1 ft, 7½ in.
Volume	6.00 cu ft
Gross weight	195.00 lb
Ship tons	0.15
Battery chargers:	
Length	1 ft, 8⅛ in.
Width	1 ft, 5⅞ in.
Height	1 ft, 6 in.
Volume	3.75 cu ft
Gross weight	45.00 lb
Ship tons	0.09
Frequency calibration set:	
Length	1 ft, 5⅛ in.
Width	1 ft, ⅛ in.
Height	11¼ in.
Volume	1.38 cu ft
Gross weight	15.00 lb
Ship tons	0.035

Outside Continental United States

Shipped:	
Angular tracker:	
Length	4 ft, 1¾ in.
Width	2 ft, 6¼ in.
Height	2 ft, 6¾ in.
Volume	27.00 cu ft
Gross weight	210.00 lb
Ship tons	0.67
Installation frame:	
Length	4 ft, 2¾ in.
Width	2 ft, 5¼ in.
Weight	2 ft, 3¼ in.
Volume	23.00 cu ft
Gross weight	105.00 lb
Ship tons	0.60

STORAGE AND SHIPMENT DATA—Continued

***Outside Continental United States*—Continued**

Shipped—Continued

Missile tracking antenna calibration test set:

Length	1 ft, 11⅛ in.
Width	1 ft, 10⅝ in.
Height	1 ft, 7⅝ in.
Volume	6.00 cu ft
Gross weight	118.00 lb
Ship tons	0.15

Generator set:

Length	2 ft, 2⅝ in.
Width	1 ft, 7⅝ in.
Height	1 ft, 7⅛ in.
Volume	6.00 cu ft
Gross weight	195.00 lb
Ship tons	0.15

Battery charger:

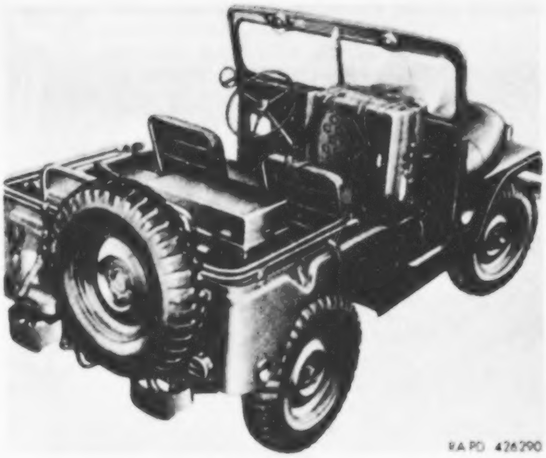
Length	1 ft, 8⅝ in.
Width	1 ft, 5⅞ in.
Height	1 ft, 6 in.
Volume	3.75 cu ft
Gross weight	45.00 lb
Ship tons	0.09

Frequency calibration set:

Length	1 ft, 5⅛ in.
Width	1 ft, ⅛ in.
Height	11⅛ in.
Volume	1.38 cu ft
Gross weight	15.00 lb
Ship tons	0.03

References: TM 9-1430-400-12, TM 9-1430-400-20P/2, SM 9-5-1430, 40, 50.

TARGET RANGING SET, GUIDED MISSILE: W/INSTALLATION FRAME, TRUCK MOUNTING



RA PD 426290

Major item

Model	*Line item No.*	*Federal stock No.*
	4-49424-10	1430-799-8475

General

TARGET RANGING SET, GUIDED MISSILE: w/installation frame, truck mounting, consists of the azimuth drive and tripod assembly, ranging unit assembly, and vest-type battery pack, and TRUCK, UTILITY: ¼-ton, 4 x 4, M38A1E2.* The target ranging set is a component of the missile guidance central and is designed to range with high accuracy against diffused ground targets. The target ranging set is used to determine slant range to a target and elevation angle information.

Differences among models

Data plate location

Classification: Standard B (OTCM 37828).

CHARACTERISTICS

Ranging unit:	
Weight	80 lb
Depth	1 ft, ⅝ in
Height	1 ft, 8 in
Width	1 ft, 8 in
Cubic content	2.9 cu ft
Power:	
Type of supply	battery
Battery voltage	28 volts nominal
Type of duty	intermittent
Capacity	84 watt-minutes
Angular coverage:	
Elevation:	
Upper limit	800 mils (−45 deg)
Lower limit	5,867 mils (−30 deg)
Azimuth coverage (continuous)	6,400 mils (360 deg)
Leveling accuracy	0.5 mils
Transmitted beam width	4 to 5 mils
Receiver field of view	1 to 15 mils

Tripod:	
Weight	27.5 lb
Depth	1 ft
Height:	
Closed	2 ft
Extended	3 ft, 6 in.
Width	1 ft
Tripod carrying case:	
Weight	22.5 lb
Depth	1 ft, 3 in.
Height	1 ft, 4 in.
Width	2 ft, 2 in.
Cubic displacement	3.6 cu ft
Vest battery pack:	
Weight	15 lb
Depth	2 in.
Height	1 ft
Width	1 ft
Cubic displacement	0.16 cu ft

PERFORMANCE

Classified.

EQUIPMENT

Basic Issue Items: See TM 9-1430-406-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Installation frame:

Within Continental United States

Shipped	
Length	2 ft, 3⅝ in.
Width	1 ft, 9⅝ in.
Height	1 ft, 6⅝ in.
Volume	6.50 cu ft
Gross weight	37.00 lb
Ship tons	0.15

Outside Continental United States

Shipped	
Length	2 ft, 3⅝ in.
Width	1 ft, 9⅝ in.
Height	1 ft, 6⅝ in.
Volume	6.50 cu ft
Gross weight	37.00 lb
Ship tons	0.15

Target ranging set:

Within Continental United States

Shipped	
Length	3 ft, 9⅛ in.
Width	2 ft, 7 in.
Height	1 ft, 8 in.
Volume	16 cu ft
Gross weight	200 lb
Ship tons	0.40

Outside Continental United States

Shipped	
Length	3 ft, 9⅛ in.
Width	2 ft, 7 in.
Height	1 ft, 8 in.
Volume	16 cu ft
Gross weight	200 lb
Ship tons	0.40

References: TM 9-1430-406-12, TM 9-1430-406-20, SM 9-5-1430-, 40, 50.

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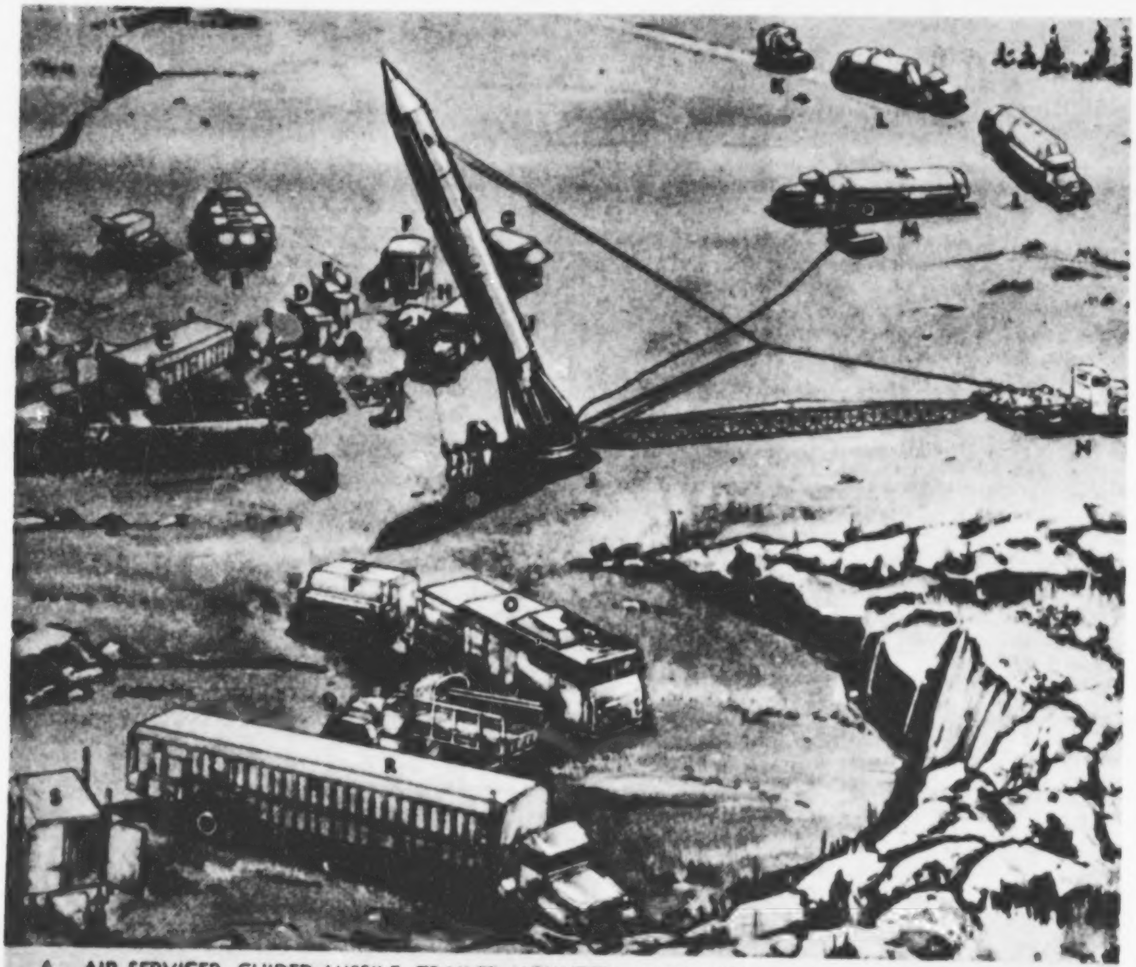
* For characteristics and data, see item in section 21.

ARTILLERY GUIDED MISSILE SYSTEM—REDSTONE

(Includes a guided missile; specially designed components of guided missile remote control systems; nonairborne guided missile launcher; a specially designed trailer for use in transporting guided missiles; and a specially designed A-frame and H-frame for guided missile handling and servicing.)



A. AIR SERVICER, GUIDED MISSILE, TRAILER MOUNTED: M483, W/E
B. TRUCK, ACCESSORIES TRANSPORTATION: 2-1/2 TON, 6x6 (ORD NO. 10369333), W/E, LOAD "A"
C. SEMITRAILER, GUIDED MISSILE BODY SECTION, WARHEAD UNIT: M481, W/E
D. GENERATOR SET, DIESEL ENGINE:
E. GENERATOR SET, DIESEL ENGINE:
F. POWER DISTRIBUTION STATION, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: AN/MSQ-32, W/E
G. GUIDED MISSILE BATTERY SERVICING SHOP, TRAILER MOUNTED: M479, W/E
H. PROGRAMMER-TEST STATION, GUIDED MISSILE, TRUCK MOUNTED: AN/MSM 38, W/E
I. GUIDED MISSILE, BALLISTIC: M8, W/E
J. LAUNCHER, PLATFORM, GUIDED MISSILE: M74, W/E
K. HYDROGEN PEROXIDE SERVICER, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: M506
L. TRANSPORTER, LIQUID NITROGEN:
M. SEMITRAILER, TANK, ALCOHOL: M388
N. ERECTOR-SERVICER, GUIDED MISSILE, TRUCK MOUNTED: M478, W/E
O. TRUCK, FIRE FIGHTING:
P. TRAILER, TANK:
Q. TRUCK, ACCESSORIES TRANSPORTATION: 2-1/2 TON, 6x6 (ORD NO. 10369333), W/E, LOAD "B"
R. SEMITRAILER, GUIDED MISSILE BODY SECTION, THRUST UNIT: XM482
S. TRAILER, GUIDED MISSILE BODY SECTION, AFT UNIT: XM480, W/E

ORD A1498-A

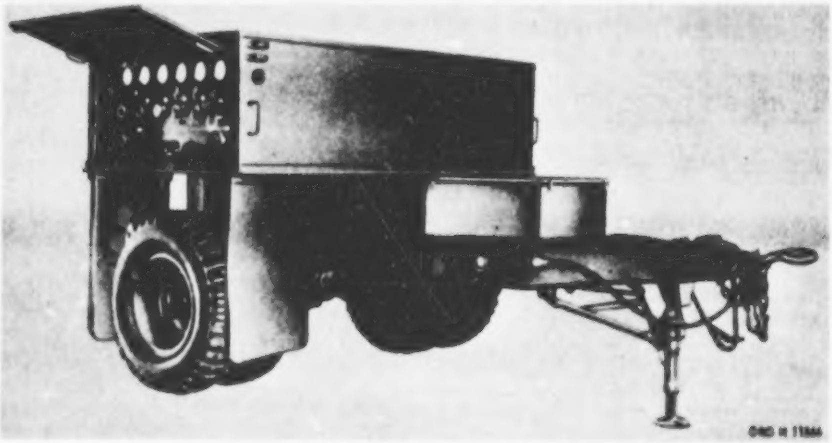
Page

AIR SERVICER, GUIDED MISSILE, TRAILER MOUNTED: M483, W/E 19-194
ERECTOR-SERVICER, GUIDED MISSILE, TRUCK MOUNTED: M478, W/E 19-195
GENERATOR SET, DIESEL ENGINE, TRAILER MOUNTED: W/E 19-196
GUIDED MISSILE, BALLISTIC: M8, W/E 19-197
GUIDED MISSILE BATTERY SERVICING SHOP, TRAILER MOUNTED: M479, W/E 19-199
HYDROGEN PEROXIDE SERVICER, GUIDED MISSILE, TRUCK MOUNTED: M506, W/E 19-200
LAUNCHER, PLATFORM, GUIDED MISSILE: M74, W/E 19-201
POWER DISTRIBUTION STATION, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: AN/MSQ-32, ¾-ton, 2-wheel, W/E 19-202
PROGRAMER-TEST STATION, GUIDED MISSILE TRUCK MOUNTED: AN/MSM-38, W/E 19-203
SEMITRAILER, LIQUID OXYGEN 19-204
SEMITRAILER, GUIDED MISSILE BODY SECTION, THRUST UNIT: M482, W/E 19-205
SEMITRAILER, GUIDED MISSILE BODY SECTION, WARHEAD UNIT: M481, W/E 19-206
SEMITRAILER, TANK, ALCOHOL: M388 19-207
TRAILER, GUIDED MISSILE BODY SECTION, AFT UNIT: M480, W/E 19-208
TRAILER, TANK: ..... 19-209 (no illus.)
TRANSPORTER, LIQUID NITROGEN: 19-210
TRUCK, ACCESSORIES TRANSPORTATION: 2½ ton, 6 x 6 (ORD NO. 10369333),W/E 19-211
TRUCK, FIRE FIGHTING: ..... 19-212 (no illus.)

(The equipment listed below is required to complete the SYSTEM. It includes maintenance, repair, and checkout equipment specially designed for use with guided missiles and guided missile remote control systems.)

MISSILE PROGRAMING DATA COMPUTER, TRUCK MOUNTED: AN/MJQ-1, W/E ..... 19-213 (no illus.)
PNEUMATIC SHOP, GUIDED MISSILE SYSTEM, TRUCK MOUNTED: M477, W/E ..... 19-214 (no illus.)
SEMITRAILER GUIDED MISSILE SUPPLY OFFICE: M484, w/e ..... 19-215 (no illus.)
SEMITRAILER MOUNTED GUIDED MISSILE STATION: AN/MSM-33 19-216
SEMITRAILER MOUNTED GUIDED MISSILE STATION: AN/MSM-41 ..... 19-217 (no illus.)
TRAILER, GUIDED-MISSILE REPAIR PARTS: M487, W/E 19-218
TRUCK, GUIDED MISSILE REPAIR PARTS, BULK MATERIAL: M486, W/E 19-219
TRUCK, GUIDED MISSILE REPAIR PARTS: M488, W/E ..... 19-220 (no illus.)

AIR SERVICER, GUIDED MISSILE, TRAILER MOUNTED: M483, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M483	4–00135–01	1450–629–9644

General

AIR SERVICER, GUIDED MISSILE, TRAILER MOUNTED: M483, w/e, supplies regulated air pressure to the missile during preissue checkout, horizontal checkout, and vertical checkout. The air servicer M483 consists of the CHASSIS, TRAILER: generator, 2½-ton, 2-wheel, M200* and the housing, air storage bottles, inlet and distribution panel, control panel, and relief valves. The air servicer M483 receives 5,000-psi air from the air compressor truck and delivers regulated high-pressure air to the launcher valve box during missile checkout and to the liquid oxygen replenishing valve during the liquid oxygen replenishing operation.

Differences among models

Data plate location: The identification plate is attached to the control panel.

Classification: Standard B (OTCM 37334).

CHARACTERISTICS

Weight	7,710 lb
Length	14 ft
Width	7 ft, 11 in.
Height	6 ft, 5½ in.

* For characteristics and data, see item in section 22.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-350-14/6.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

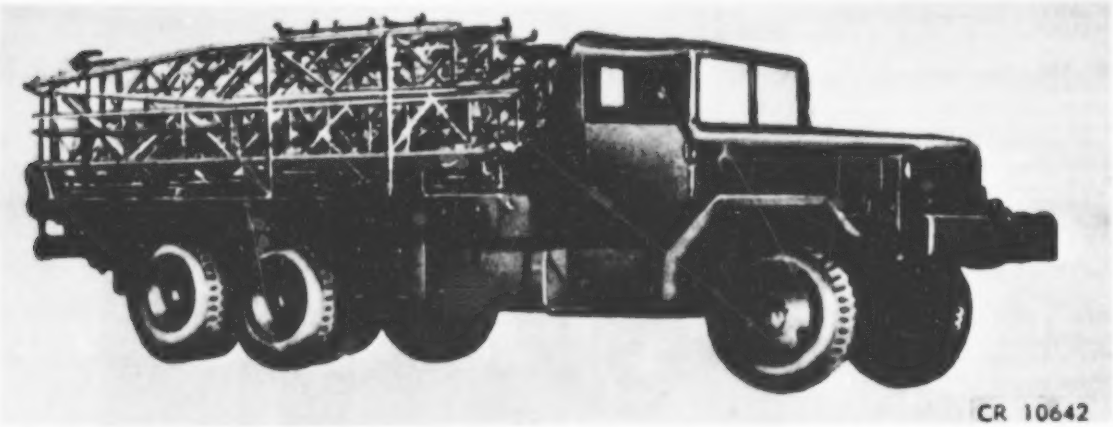
Shipped	
Length	14 ft
Width	7 ft, 11 in.
Height	6 ft, 5½ in.
Volume	715 cu ft
Gross weight	7,710 lb
Ship tons	17.88

Outside Continental United States

Shipped	
Length	14 ft
Width	7 ft, 11 in.
Height	6 ft, 5½ in.
Volume	715 cu ft
Gross weight	7,710 lb
Ship tons	17.88

References: SM 9-5-1430, 40, 50; TM 9-1450-350-14/6, TM 9-1450-350-24P/6.

ERECTOR-SERVICER, GUIDED MISSILE, TRUCK MOUNTED· M478, W/E



CR 10642

Major item

Model	*Line item No.*	*Federal stock No.*
M478	4-13505-01	1450-629-9779

General

ERECTOR-SERVICER, GUIDED MISSILE, TRUCK MOUNTED: M478, w/e, consists of a modified CHASSIS TRUCK: 2½-ton, 6 x 6, M46* and the following equipment: tubular aluminum A-frame (jib pole) and H-frame, personnel elevator, two winches, servicing platform, hydraulic unit assembly, two chain hoists, and associated slings and cables. The A-frame functions as a boom to suspend two chain hoists and lifting slings for lifting and positioning the aft unit of the GUIDED MISSILE, BALLISTIC: M8* to the warhead unit, for lifting and positioning the rotating frame assembly of the launcher M74 to the thrust unit of the missile M8, and for lifting and suspending the thrust unit for attachment to the body. The H-frame, which is attached to the launcher M74 and truck M46, provides stability between the two pieces of equipment and also serves as a boom for positioning and supporting the servicing platform and personnel elevator. Upon completion of missile assembly and horizontal testing, the missile M8 is attached to the launcher M74 and erecting cables, suspended from the equalizer pulley of the A-frame, are power is attached to the hoisting bolts at the forward end of the missile. Winch then applied, through the cable system and the A-frame, to erect the missile.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334).

* For characteristics and data, see item in section 21 and on page 19-197.

CHARACTERISTICS

Length (overall, with bumper winch)	29 ft. 5 in.
Length (overall, without bumper winch)	28 ft. 3 in.
Width (overall)	7 ft. 11 in.
Height (overall, fully loaded, estimated)	8 ft. 2 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1440-350-14.

INSTRUCTIONAL MATERIAL

SHIPMENT AND STORAGE DATA

Within Continental United States

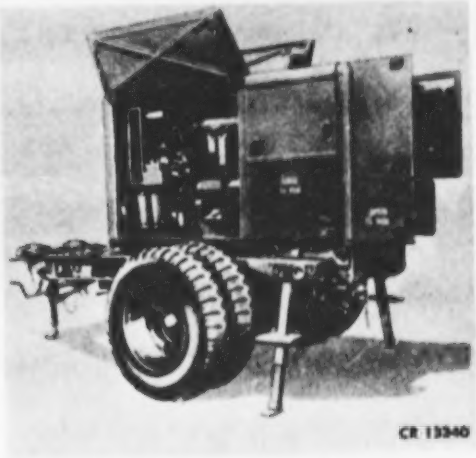
Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Gross weight
- Ship tons

References: SM 9-5-1430, 40, 50; TM 9-1440-350-14, TM 9-1440-350-24P.

GENERATOR SET, DIESEL ENGINE, TRAILER MOUNTED: w/e



CR 13340

Model ***Line item No.*** ***Federal stock No.***

General

GENERATOR SET, DIESEL, TRAILER MOUNTED: w/e supplies electrical power through a relay box to the power distributor station. The generator set consists of a standard M200, 2-wheel trailer, heavy duty chassis and housing, diesel-driven 60-KW generator, console panel and accessories. The generator set provides power (120-volt, single-phase and 208-volt, 3-phase, 60-cycle power) to the distribution station.

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

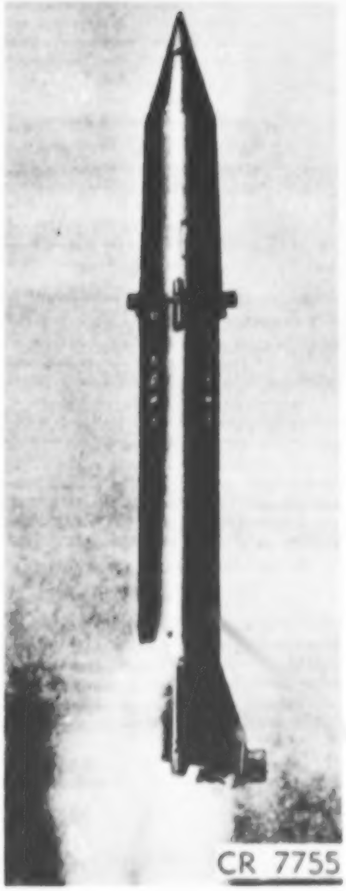
Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

References:

GUIDED MISSILE, BALLISTIC: M8, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M3		1410-629-9714

General

GUIDED MISSILE, BALLISTIC: M8, is a separable, inertially guided, liquid propellant missile designed for use by the field artillery. The missile ballistic shell consists of three major parts: the guided missile aft unit, thrust unit, and the warhead section. The aft unit has an instrument compartment which contains guidance and control equipment, and other pertinent instrumentation. The thrust unit contains the rocket engine and the liquid oxygen and alcohol tanks. The warhead section contains the payload compartment and the radar fuse.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334).

CHARACTERISTICS

Missile:	
Weight:	
Assembled missile, empty	16,000 lb
Assembled missile, fueled	60,710 lb
Aft unit	2,350 ± 40 lb
Thrust unit	5,790 ± 70 lb
Warhead section	7,870 ± 70 lb
Length:	
Missile (overall)	69 ft, 4 1/16 in.
Warhead section	18 ft, 8 1/16 in.
Thrust unit	41 ft, 4 in.
Aft unit	9 ft, 4 in.
Width:	
Aft unit (including air vanes)	8 ft, 8 in.
Thrust unit (including air rudders)	9 ft, 6 in.
Diameter (maximum):	
Aft unit	5 ft, 10 in.
Warhead section	5 ft, 3 in.
Thrust unit	5 ft, 10 in.
Aft unit trailer:	
Weight:	
Empty	6,020 lb
Loaded	8,600 ± 40 lb
Chassis	4,300 lb
Cover	1,420 lb
Tire:	
Main:	
Size	9.00 x 20–8
Pressure:	
Normal	60 psi
Air travel	25 psi
Landing gear:	
Size	4.00 x 8–6
Pressure:	
Normal	100 psi
Air travel	30 psi
Length	15 ft, 4 in.
Width	8 ft
Height	8 ft, 10 in.
Warhead unit semitrailer:	
Weight:	
Cover	3,470 lb
Chassis	8,290 lb
Empty	11,760 lb
Loaded	19,770 ± 70 lb
Length	21 ft
Width	8 ft
Height	8 ft, 10 in.
Tire:	
Main:	
Size	11.00 x 20–12
Pressure:	
Normal	50 psi
Air travel	25 psi
Landing gear:	
Size	6.00 x 9–10
Pressure:	
Normal	100 psi
Air travel	30 psi
Thrust unit semitrailer:	
Weight:	
Cover	3,530 lb
Chassis	12,890 lb
Empty	16,420 lb
Loaded	22,700 ± 70 lb
Length	43 ft, 4 in.
Width	8 ft
Height	11 ft
Tire:	
Main:	
Size	11.00 x 20–12
Pressure:	
Normal	75 psi
Air travel	35 psi
Landing gear:	
Size	6.00 x 9–10
Pressure:	
Normal	100 psi
Air travel	30 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1410-350-14/1.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Aft unit trailer:

Within Continental United States

Shipped 1 trailer uncrated.

Length	15 ft, 4 in.
Width	8 ft
Height	8 ft, 10 in.
Volume	1,173 cu ft
Gross weight	8,600 ±40 lb
Ship tons	29.32

Outside Continental United States

Shipped 1 trailer uncrated.

Length	15 ft, 4 in.
Width	8 ft
Height	8 ft, 10 in.
Volume	1,173 cu ft
Gross weight	8,600 ±40 lb
Ship tons	29.32

Warhead unit semitrailer:

Within Continental United States

Shipped 1 semitrailer uncrated.

Length	21 ft
Width	8 ft
Height	8 ft, 10 in.
Volume	1,477 cu ft
Gross weight	19,770 ±70 lb
Ship tons	36.9

Outside Continental United States

Shipped 1 semitrailer uncrated.

Length	21 ft
Width	8 ft
Height	8 ft, 10 in.
Volume	1,477 cu ft
Gross weight	19,770 ±70 lb
Ship tons	36.9

Thrust unit semitrailer:

Within Continental United States

Shipped 1 semitrailer uncrated.

Length	43 ft, 4 in.
Width	8 ft
Height	11 ft
Volume	3,109 cu ft
Gross weight	22,700 ±70 lb
Ship tons	77.7

Outside Continental United States

Shipped 1 semitrailer uncrated.

Length	43 ft, 4 in.
Width	8 ft
Height	11 ft
Volume	3,109 cu ft
Gross weight	22,700 ±70 lb
Ship tons	77.7

References: SM 9-5-1410; SNL Y129, TM 9-1410-350-14/1, TM 9-1410-350-24P/1, TM 9-1410-350-14/2, TM 9-1410-350-14/3, TM 9-1410-350-14/4, TM 9-1410-350-14/5, TM 9-1410-350-14/6, TM 9-1410-350-14/7.

GUIDED MISSILE BATTERY SERVICING SHOP, TRAILER MOUNTED: M479, W/E

ORD A1499

Major item

Model	*Line item No.*	*Federal stock No.*
M479	4-01040-01	1450-629-9611

General

GUIDED MISSILE BATTERY SERVICING SHOP, TRAILER MOUNTED: M479, w/e, is used for activating, testing, and booster-charging batteries for the guided missile M8. The battery servicing shop M479 consists of a unmodified trailer chassis and the following: battery servicing trailer housing, battery servicing center, battery servicing trays, battery charging center, electrolyte bottles, batteries, and miscellaneous battery servicing equipment.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

Weight	2,840 lb
Volume	680.35 cu ft
Length	12 ft. $2\frac{5}{8}$ in.
Width	6 ft. $2\frac{7}{8}$ in.
Height	8 ft. $11\frac{3}{16}$ in.
Side slope (max)	20 percent
Angle of departure	45 deg

PERFORMANCE

Speed, towing:	
Improved roads (max)	35 mph
Unimproved roads (max)	20 mph

EQUIPMENT

Basic Issue Items: See TM 9-1450-350-14/4.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

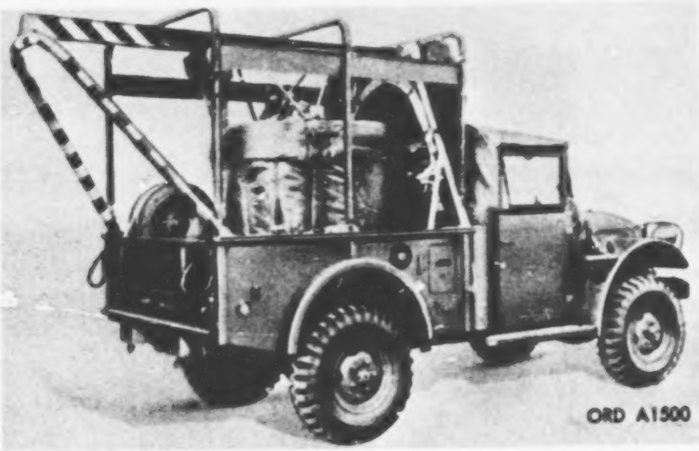
Shipped	
Length	12 ft. $2\frac{5}{8}$ in
Width	6 ft. $2\frac{7}{8}$ in
Height	8 ft. $11\frac{3}{16}$ in.
Volume	680.3 cu ft
Gross weight	3,160 lb
Ship tons	17.01

Outside Continental United States

Shipped	
Length	12 ft. $2\frac{5}{8}$ in.
Width	6 ft. $2\frac{7}{8}$ in.
Height	8 ft. $11\frac{3}{16}$ in.
Volume	680.3 cu ft
Gross weight	3,160 lb
Ship tons	17.01

References: SM 9-5-1430, 40, 50; TM 9-1450-350-14/4, TM 9-1450-350-24P/4.

HYDROGEN PEROXIDE SERVICER, GUIDED MISSILE SYSTEM TRUCK MOUNTED: M506



Major item

Model	*Line item No.*	*Federal stock No.*
M506		1450-677-1091

General

HYDROGEN PEROXIDE SERVICER, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: M506, is used to store, transport, and distribute hydrogen peroxide used for the missile operation. The hydrogen peroxide servicer M506 consists of a modified ¾-ton, 4 x 4, M37 cargo truck and the following equipment: a monorail supported by A-frames; a chain-fall assembled to the monorail; a gasoline fired heating system and the liquid nitrogen cooling system; an electric motor and pump assembly; an outflow tank; a 50-foot electric power cable; and all necessary fittings and hose.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Weight:	
Empty	7,197
Loaded	8,263
Length	17 ft, 10⅝ in.
Width	6 ft, 10 in.
Height	9 ft, 3 in.
Angle of approach	38 deg
Angle of departure	32 deg
Tire:	
Size	9.00 x 16
Ply	
Pressure	8
Turning radius	25 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1450-350-14/1.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 hydrogen peroxide servicer uncrated

Length	17 ft, 10⅝ in.
Width	6 ft, 1⅛ in.
Height	9 ft, 3 in.
Volume	1013.9 cu ft
Gross weight	7,197 lb
Ship tons	25.35

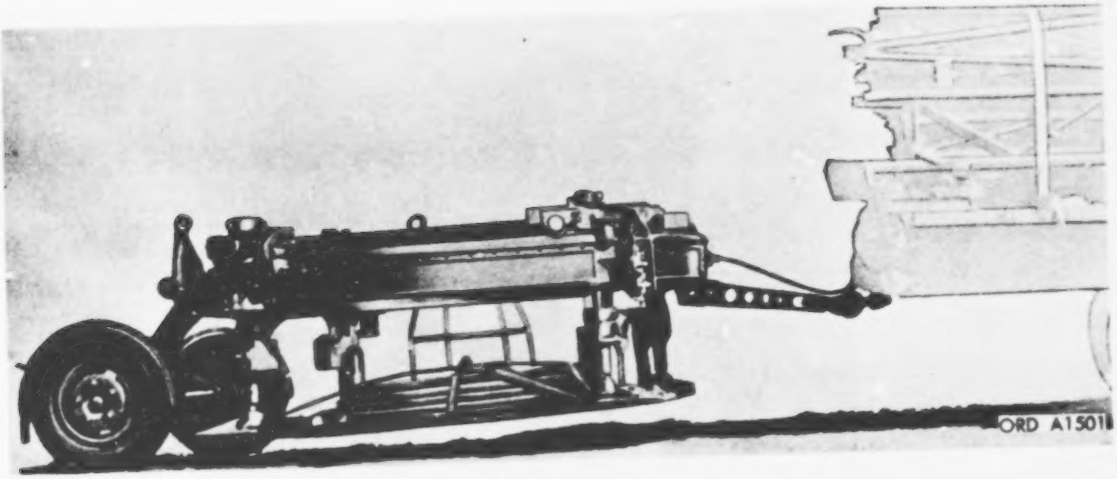
Outside Continental United States

Shipped 1 hydrogen peroxide servicer uncrated

Length	17 ft, 10⅝ in.
Width	6 ft, 1⅛ in.
Height	9 ft, 3 in.
Volume	1013.9 cu ft
Gross weight	7,197 lb
Ship tons	25.35

References: TM 9-1450-350-14/1, TM 9-1450-350-24P/1.

LAUNCHER, PLATFORM, GUIDED MISSILE: M74, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M74	4-20770-01	1440-629-9594

General

LAUNCHER, PLATFORM, GUIDED MISSILE: M74, w/e, supports the GUIDED MISSILE, BALLISTIC: M8* during vertical checkout, propellant filling, launching preparation, and missile firing. The platform launcher consists of a rotating frame assembly, a body assembly, and four adjustable jack assemblies. In the lacunching position, the missile rests vertically on four fin support pads located 90 degrees apart on the rotating frame. The body assembly supports the rotating frame. The jack assemblies level the body assembly. During missile erection, the rotating frame (which is attached to the guided missile M8 in its initial horizontal position just before erection) and missile pivot onto the launcher body. Attached to the platform launcher M74 are two snubber cylinders, which have a yoke on the end of each piston rod, whose purpose is to gently lower the guided missile M8 onto the launcher.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334).

PERFORMANCE

CHARACTERISTICS

Weight	6,400 lb
Length (traveling position)	15 ft
Height (traveling position)	4 ft, $8\frac{7}{8}$ in
Width (traveling position)	9 ft, $9\frac{5}{8}$ in

* For characteristics and data, see item on page 19–197.

EQUIPMENT

Basic Issue Items: See TM 9-1440-350-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

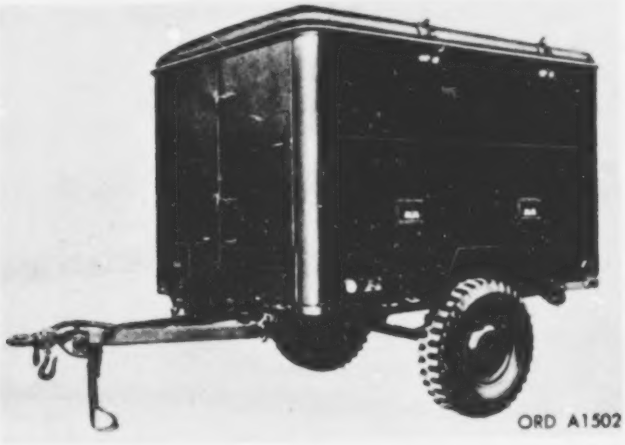
Shipped	
Length	15 ft
Width	9 ft, $9\frac{5}{8}$ in.
Height	4 ft, $8\frac{7}{8}$ in.
Volume	679.5 cu ft
Gross weight	6,720 lb
Ship tons	17.44

Outside Continental United States

Shipped	
Length	15 ft
Width	9 ft, $9\frac{5}{8}$ in.
Height	4 ft, $8\frac{7}{8}$ in.
Volume	697.5 cu ft
Gross weight	6,720 lb
Ship tons	17.44

References: SM 9-5-1430, 40, 50; TM 9-1440-350-14, TM 9-1440-350-24P.

POWER DISTRIBUTION STATION, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: M101 (AN/MSQ-32,) ¾-TON, 2-WHEEL, W/E


ORD A1502

Major item

Model	*Line item No.*	*Federal stock No.*
M101	4-30680-01	1450-690-7389

General

POWER DISTRIBUTION STATION, GUIDED MISSILE SYSTEM, TRAILER MOUNTED: M101 (AN/MSQ-32), ¾-ton, 2-wheel, w/e, receives 208-volt, 60-cycle, 3-phase power from the generator trailer, converts it to usable voltages and frequencies, and distributes it to other ground equipment and to the missile. The trailer consists of the chassis, pallet, and cover. The pallet, to which the equipment is attached, can be removed from the chassis by disconnecting the bolts which hold it to the chassis. The cover, in turn, can be lifted off the pallet by disconnecting 12 eyebolts, providing easy access to interior components. The trailer contains the receptacle box, main junction box, lighting and ac outlet panel, power console, telephone box, inverter energizer, electrical harness raceway, heater control box, 400-cycle inverter, and network energizer.

Differences among models

Data plate location

The identification plate is riveted to the left (road) side panel of the body near the front.

Classification: Standard B (OTCM 37334).

CHARACTERISTICS

Weight:	
w/o equipment	1,500 lb
w/equipment	3,500 lb
Length	12 ft, 4 in.
Width	6 ft, 5 in.
Height	8 ft, 2 in.
Ground clearance (min)	1 ft, 2 in.
Angle of departure	45 deg

PERFORMANCE

Speed (towed):	
Improved roads	35 mph
Unimproved roads	20 mph
Slope operation (max)	20 percent

EQUIPMENT

Basic Issue Items: See TM 9-1450-350-14/3.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	12 ft, 4 in.
Width	6 ft, 5 in.
Height	8 ft, 2 in.
Volume	646.7 cu ft
Gross weight	3,500 lb
Ship tons	16.17

Outside Continental United States

Shipped	
Length	12 ft, 4 in.
Width	6 ft, 5 in.
Height	8 ft, 2 in.
Volume	646.7 cu ft
Gross weight	3,500 lb
Ship tons	16.17

References: TM 9-1450-350-14/3, TM 9-1450-350-24P/3

PROGRAMER-TEST STATION, GUIDED MISSILE TRUCK MOUNTED: AN/MSM 38, W/E

ORD A1503

Model	*Line item No.*	*Federal stock No.*
AN/MSM 38	4-31125-01	1430-690-7388

General

PROGRAMER-TEST STATION, GUIDED MISSILE TRUCK MOUNTED: AN/MSM 38, w/e, provides mobile facilities for testing missile electrical circuits prior to the flight of the GUIDED MISSILE, BALLISTIC M8.* Furthermore, the programer-test station is used to set up the missile guidance circuits according to the predetermined trajectory. After the preflight check has been completed, missile control is transferred to a remote location and the programer-test station is withdrawn from the firing area. The programer-test station AN/MSM 38 consists of a truck, van: shop, 2½-ton, 6 x 6, (modified) and the following equipment: control and test panels, program device console, and communications and frequency control console which are installed; flight simulator box, booster serve interrupter box, portable lamp, multimeter, insulation tester, ST-80 load box, and remote firing box which are carried in the installed consoles, and the relay box and ground equipment test fixture which are stored in the vestibule of the van.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

Weight	21,680 lb
Length	22 ft. 7⅝ in
Width	8 ft. ⅛ in
Height	10 ft. 10 in
Angle of approach	48 deg
Angle of departure	44 deg

---

* For characteristics and data, see item on page 19-197.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1430-350-14/1.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

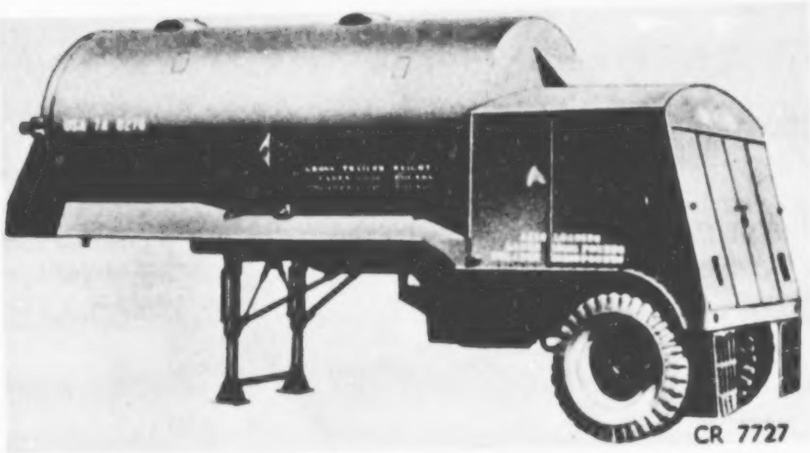
Shipped	
Length	22 ft. 7⅝ in.
Width	8 ft. 1⅛ in.
Height	10 ft. 10 in.
Volume	2,054 cu ft
Gross weight	21,680 lb
Ship tons	51.35

Outside Continental United States

Shipped	
Length	22 ft. 7⅝ in
Width	8 ft. 1⅛ in.
Height	10 ft. 10 in.
Volume	2,054 cu ft
Gross weight	21,680 lb
Ship tons	51.35

References: TM 9-1430-350-14/1, TM 9-1430-350-14/2, TM 9-1430-350-24P/2

SEMITRAILER, LIQUID OXYGEN


CR 7727

Model *Line item No.* *Federal stock No.*

General

SEMITRAILER, LIQUID OXYGEN is a 2-wheel, standard tank-type vehicle with a liquid oxygen capacity of 9 tons. It is designed to transport liquid oxygen from the storage area to the launching site, and to transfer liquid oxygen to the Redstone missile. The liquid oxygen transfer equipment is mounted in a closed compartment at the rear of the tank. Initial filling of the missile tanks at the launching site and final topping to replace evaporation losses are accomplished from the semitrailer. A TRUCK, TRACTOR: 5-ton, 6 x 6, M52* serves as the prime mover for the semitrailer. The semitrailer weighs 35,640 pounds when loaded.

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

* For characteristics and data, see item in section 21.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

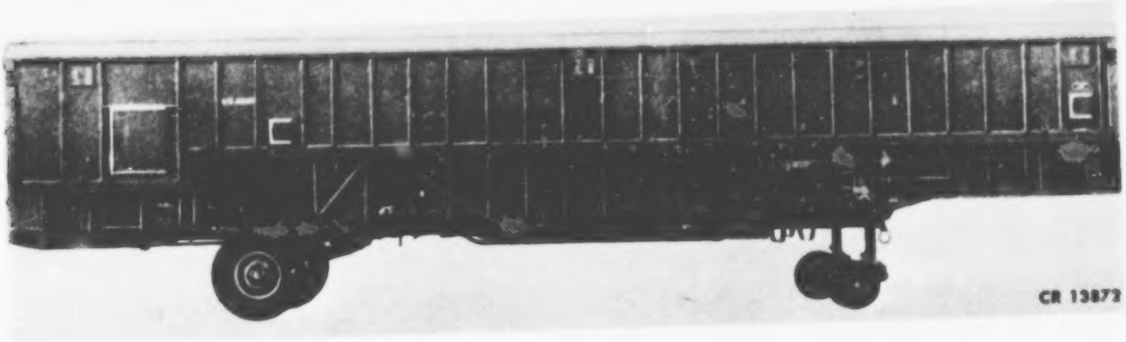
Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

References:

SEMITRAILER, GUIDED MISSILE BODY SECTION, THRUST UNIT: XM482, W/E



CR 13872

	Major item	
Model	***Line item No.***	***Federal stock No.***
XM482		1450–629–9634

General

SEMITRAILER, GUIDED MISSILE BODY SECTION, THRUST UNIT: XM482, w/e is a 2-wheel, single axle, van type semitrailer designed to provide transportation and storage for the missile thrust unit and those missile components which are installed at the firing site. The base of the assembly is of standard construction and contains a rubber-lined saddle, a hold down clamp, and bolt-receiver which secure the thrust unit while in transit. Four jacks equipped with casters are used to lift and remove the cover assembly from the semitrailer base. A TRUCK, TRACTOR: 5-ton, 6 x 6, M52* serves as a prime mover for the semitrailer. The weight of the semitrailer when loaded is 18,927 pounds.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

PERFORMANCE

* For characteristics and data, see item in section 21.

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

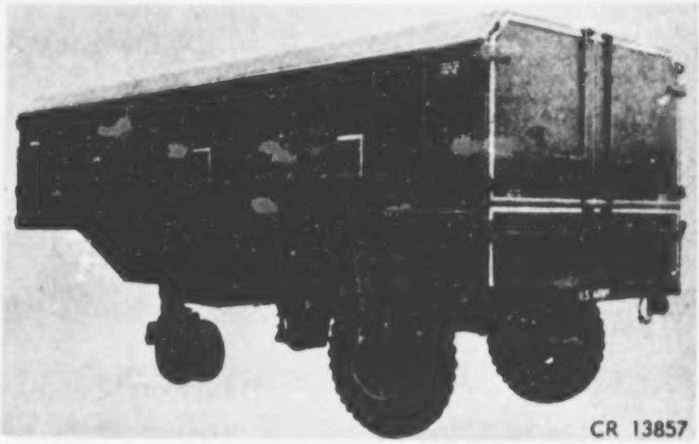
Shipped	
Length	43 ft. 4 in.
Width	8 ft
Height	10 ft. $11\frac{9}{16}$ in.
Volume	3109.00 cu ft
Gross weight	18,927 lb
Ship tons	77.72

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–1410–350–14/1, TM 9–1410–350–24P/1, TM 9–1450–350–14/2

SEMITRAILER, GUIDED MISSILE BODY SECTION, WARHEAD UNIT: M481, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M481	4-38930-01	1450-629-9624

General

SEMITRAILER, GUIDED MISSILE BODY SECTION, WARHEAD UNIT: M481, w/e is a 2-wheel, single axle, van type semitrailer designed to provide transportation and storage for the warhead unit, heater-cooler boom and small on-missile explosive accessories. The base assembly is of standard frame construction and contains a rubber-lined saddle, hold down clamp, and bolt receiver supports which secure the warhead unit while in transit. Four jacks equipped with casters are used to lift and remove the cover assembly from the semitrailer base. Storage compartments, accessible from the outside are provided for the jack tubes, jack bodies and jack casters. Explosive items are stored in a box located inside the semitrailer. A 2½-ton 6 x 6 truck tractor serves as a prime mover for the semitrailer. The weight of the semitrailer loaded is 17,660 pounds.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

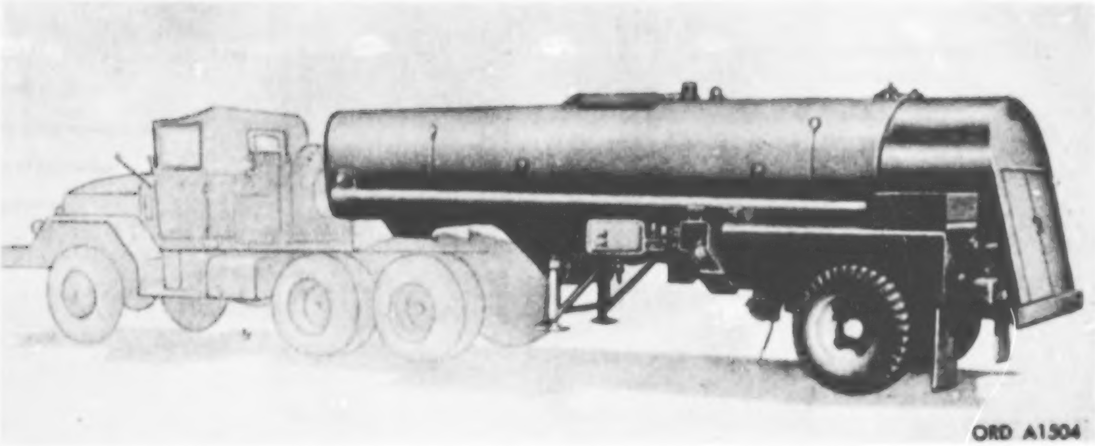
Shipped	
Length	21 ft
Width	8 ft
Height	8 ft, 9½ in.
Volume	1,477.00 cu ft
Gross weight	11,760.00 lb
Ship tons	36.92

Outside Continental United States

Shipped	
Length	21 ft
Width	8 ft
Height	8 ft, 9½ in.
Volume	1,477.00 cu ft
Gross weight	11,760.00 lb
Ship tons	36.92

References: SM 9-5-1430, 40, 50; SNL Y147, TM 9-1410-350-14/1, TM 9-1410-350-24P/1, TM 9-1450-350-14/2, TM 39-20-7, TM 39-35-15, TM 39-W39.16-1, TM 9-1903.

SEMITRAILER, TANK ALCOHOL: M388



ORD A1504

Major item

Model	*Line item No.*	*Federal stock No.*
M388	4–38973–01	2330–629–9551

General

SEMITRAILER, TANK ALCOHOL: M388, is a 2-wheel, 3,000-gallon, tank-type vehicle designed to transport fuel from the storage area to the launching site and to fill, recirculate, or drain fuel as required at the launching site. The semitrailer consists of an aluminum, elliptically-shaped, one-compartment tank, and undercarriage, a pumping compartment, and a heater system. The fuel-transfer equipment is located at the rear of the tank and provides for metering, filtering, and transferring the fuel to the missile. A 1-inch thick rubber insulation covers the entire aluminum tank with the exception of the pumping compartment. The pumping compartment contains a stainless steel tank for fuel and two pumping units. A TRUCK, TRACTOR: 5-ton, 6 x 6, M52* serves as a prime mover for the semitrailer. The semitrailer weighs 24,300 pounds when loaded.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334).

CHARACTERISTICS

Weight	29,290 lb
Length	26 ft. 4½ in.
Width	8 ft. ⅝ in.
Height	8 ft. 4 in.
Angle of departure	25°

* For characteristics and data, see item in section 21.

Capacity:

Alcohol tank	3,000 gal
Inert tank	20 gal

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9–2330–350–14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	26 ft. 4½ in.
Width	8 ft. ⅝ in.
Height	8 ft. 4 in.
Volume	1,770 cu ft
Gross weight	29,290 lb
Ship tons	44.25

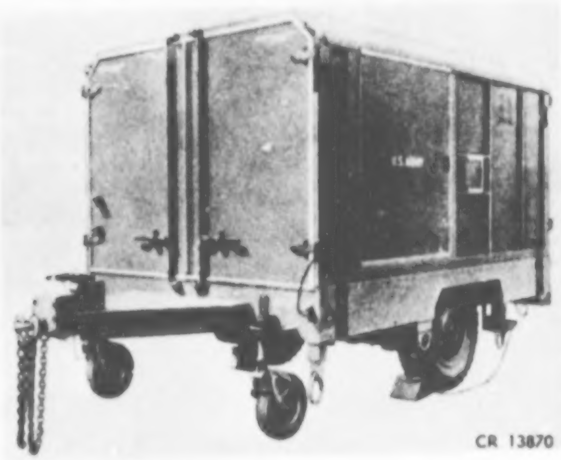
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–2330–350–14, TM 9–2330–350–24P, TM 9–891, ORD M7–224

TRAILER, GUIDED MISSILE BODY SECTION, AFT UNIT: M480, W/E



CR 13870

Major item

Model	*Line item No.*	*Federal stock No.*
M480	4-57415-01	1450-629-9619

General

TRAILER, GUIDED MISSILE BODY SECTION, AFT UNIT: M480, w/e is a 2-wheeled, single axle, van type vehicle designed to provide transportation and storage for the aft unit. The hose assembly consists of a standard frame construction that contains a rubber-lined cradle and a hold-down band to secure the aft unit while in transit. Four jacks equipped with casters are used to lift and remove the cover assembly from the trailer hose. Storage compartments and brackets for the jack bodies and jack casters are located on the floor of the trailer. An access door in the floor plate permits adjustment of the servo-junction box in the aft unit while the unit is in position on the trailer. A TRUCK: 2½ ton, 6 x 6 serves as a prime mover for the trailer. The weight of the trailer loaded is 6,390 pounds

Differences among models

Data plate location

Classification: Standard B (OTCM 37334).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	15 ft, 4 in.
Width	8 ft
Height	8 ft, $9\frac{11}{16}$ in.
Volume	1173.00 cu ft
Gross weight	6,390 lb
Ship tons	29.32

Outside Continental United States

Shipped	
Length	15 ft, 4 in
Width	8 ft
Height	8 ft, $9\frac{11}{16}$ in.
Volume	1173.00 cu ft
Gross weight	6,390 lb
Ship tons	29.32

References: SM 9-5-1430, 40, 50; SNL Y145, TM 9-1410-350-14/1, TM 9-1410-350-24P/1, TM 9-1450-350-14/2.

TRAILER TANK

(Data to be published at a later date)

Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

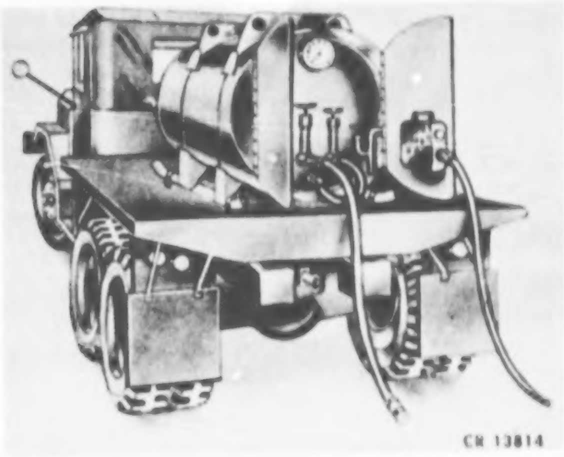
Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

References:

TRANSPORTER, LIQUID NITROGEN

(Data to be published at a later date)



Model	*Line item No.*	*Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
- Length..
- Width..
- Height..
- Volume..
- Gross weight..
- Ship tons..

Outside Continental United States

Shipped
- Length..
- Width..
- Height..
- Volume..
- Gross weight..
- Ship tons..

References:

TRUCK, ACCESSORIES TRANSPORTATION: 2½-TON, 6 X 6 (ORD NO. 10369333), W/E

SHOWN:
TRUCK, ACCESSORIES TRANSPORTATION: 2 - ½ TON, 6 x 6 (ORD NO. 10369333), W/E, LOAD "A"

SHOWN:
TRUCK, ACCESSORIES TRANSPORTATION: 2 - ½ TON, 6 x 6 (ORD NO. 10369333), W/E, LOAD "B"

ORD A1505

Model ***Line item No.*** ***Federal stock No.***

General

TRUCK, ACCESSORIES TRANSPORTATION: 2½ ton, 6 x 6 (ORD NO. 10369333), W/E, provides transportation for accessories which include the majority of interconnecting cables, fueling accessories, launcher accessories, handling equipment, missile system test equipment, and a gas-fired portable heater which are essential to the preparation and firing of the ballistic guided missile M8. The accessories truck is an unmodified TRUCK, CARGO: 2½ ton, 6 x 6, M35* One truck hauls load A (fueling accessories container, AC distribution box and door holder container, launcher accessories and LOX filter accessories container, pressure gages and thrust controller test set container, LOX fill hoses container, valve box and accessories container, pressurization kit container, ST-80 handling accessories container, multiple test jumper container, cable support brackets containers, protective boots container, and protective helmets containers), and the other truck hauls load B (ST-80 handling equipment, heater and trailer, platforms, ladders, stands, LOX vent conduit and flexible pipe, ground rods, door holders, alcohol hose, calibration probes, cable reel stands, and cable reels).

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

* For characteristics and data, see item in section 21.

EQUIPMENT

Basic Issue Items: See TM 9-1450-350-14/5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	36 ft
Width	8 ft
Height	9 ft. 4 in.
Volume	2,687 cu ft
Gross weight:	
Load A plus vehicle	15,765 lb
Load B plus vehicle	14,086 lb
Ship tons	67.2

Outside Continental United States

Shipped	
Length	36 ft
Width	8 ft
Height	9 ft. 4 in.
Volume	2,687 cu ft
Gross weight:	
Load A plus vehicle	15,765 lb
Load B plus vehicle	14,086 lb
Ship tons	67.2

References: TM 9-1450-350-14/5, TM 9-1450-350-24P/5.

TRUCK, FIRE FIGHTING

(Data to be published at a later date)

Model *Line item No.* *Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

References:

MISSILE PROGRAMING DATA COMPUTER, TRUCK MOUNTED: AN/MJQ-1, W/E

(Data to be published at a later date)

Model	*Line item No.*	*Federal stock No.*

General

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: SM 9-5-1430.40.50; TM 9-1430-350-14/3; TM 9-1430-350-14/4; TM 9-1430-350-14/5.

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PNEUMATIC SHOP, GUIDED MISSILE SYSTEM, TRUCK MOUNTED: M477, W/E

Secondary item

Model	*Line item No.*	*Federal stock No.*
M477	4-30445-01	4935-629-9600

General

PNEUMATIC SHOP, GUIDED MISSILE SYSTEM, TRUCK MOUNTED: M477, w/e is a basic TRUCK: 2½-ton, 6 x 6, M109 modified to transport and store the equipment required to test and repair pneumatic systems components. The pneumatic shop contains a checkout bench consisting of an electrical and pneumatic compartment, a control well, a holding-fixture test well, and drawers for storing special test fixtures and fittings. The electrical and pneumatic compartment contains components which provide electrical power and air pressure to the control panel during test operations.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	22 ft, 4 in.
Width	8 ft, 5 in.
Height	9 ft, 8 in.
Volume	
Gross weight	22,155 lb
Ship tons	

References: TM 9-4935-350-14/11, TM 9-4935-350-34P/11, TM 9-1410-350-14/3, TM 9-1450-350-14/5, TM 9-4935-350-14/12, TM 9-8022.

SEMITRAILER, GUIDED MISSILE SUPPLY OFFICE: M484, W/E

Model	*Line item No.*	*Federal stock No.*
M484		

General

SEMITRAILER, GUIDED MISSILE SUPPLY OFFICE: M484, w/e, is a 3-ton, two-wheel, semitrailer designed to store and transport the necessary files and clerical equipment used to maintain repair parts records for the Redstone missile. Located along one wall of the semitrailer is a bookcase, a repair parts record file, a repair basket rack, a graph-o-type embossing machine, and a heater compartment. Along the opposite wall are four Kardex file cabinets, a bookcase, and an addressograph plate storage cabinet, and a classified file. A TRUCK, TRACTOR: 5-ton, 6 x 6, M52* serves as a prime mover.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

Weight..

Length..

Width..

Height..

* For characteristics and data, see item in section 21.

PERFORMANCE

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

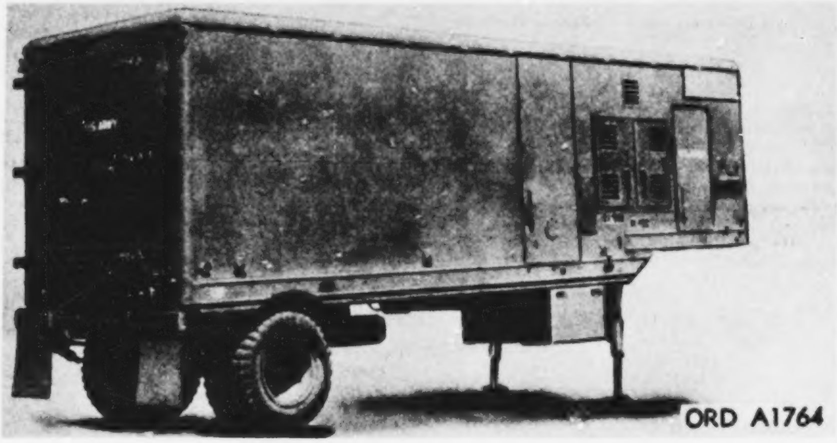
Shipped
- Length..
- Width..
- Height..
- Volume..
- Gross weight..
- Ship tons..

Outside Continental United States

Shipped
- Length..
- Width..
- Height..
- Volume..
- Gross weight..
- Ship tons..

References: TM 9-1450-350-14/2.

SEMITRAILER MOUNTED GUIDED MISSILE STATION: AN/MSM-33



ORD A1764

Model	*Line item No.*	*Federal stock No.*
AN/MSM-33		

General

SEMITRAILER MOUNTED GUIDED MISSILE STATION: AN/MSM-33 is a 3-ton, 2-wheel van designed to transport and store the equipment required to functionally test the control computer, the control relay box, the actuator, and the inverter. A power panel and receptacle, an energizer, and inverter, and a static dc power supply are contained in the semitrailer to supply power and perform tests on related components. The auxiliary equipment contained in the semitrailer includes air conditioning and heating systems, cable reel storage boxse, and equipment access doors. A TRUCK, TRACTOR: 5-ton, 6 x 6, M52* serves as a prime mover for the semitrailer.

* For characteristics and data, see item in section 21.

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

References: TM 9-4935-350-14/1, TM 9-4935-350-34P/1, TM 9-2330-288-15.

SEMITRAILER MOUNTED GUIDED MISSILE STATION: AN/MSM-41

(Data to be published at a later date)

Model	*Line item No.*	*Federal stock No.*

General

Differences among models

Data plate location

Classification

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

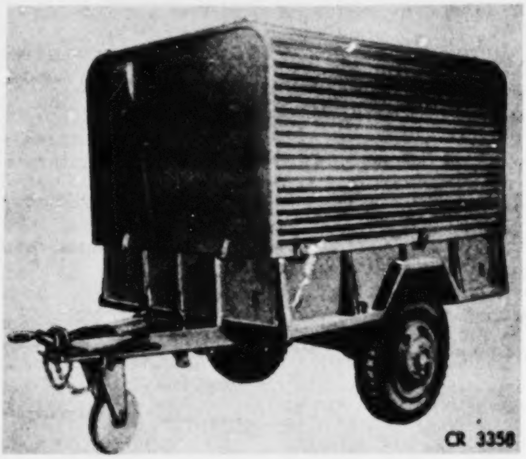
Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

References: TM 9-4935-350-14/1.

TRAILER, GUIDED MISSILE REPAIR PARTS: M487, W/E



CR 3358

Major item

Model	*Line item No.*	*Federal stock No.*
M487	4-57420-01	1450-629-9669

General

Differences among models

Data plate location

Classification: Standard B (OTCM 3734)

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

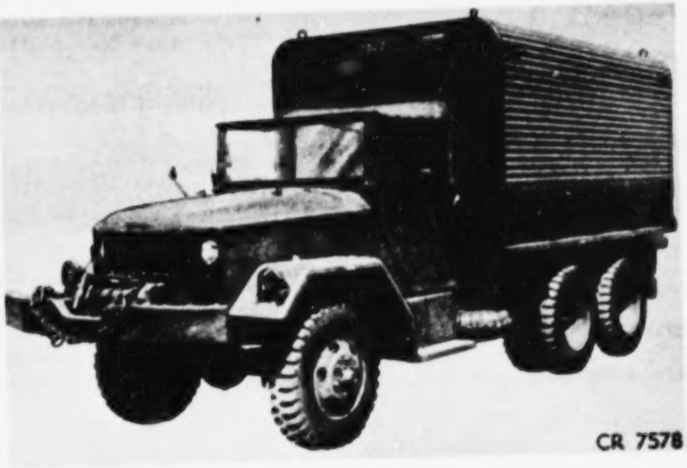
Shipped	
Length	13 ft, 10 in.
Width	6 ft, 11 in.
Height	9 ft, 4 in.
Volume	868.00 cu ft
Gross weight	2,640 lb
Ship tons	21.7

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1450-350-14/2, TM 9-1450-350-24P/2, TM 9-8226.

TRUCK, GUIDED MISSILE REPAIR PARTS, BULK MATERIAL: M486, W/E


CR 7578

Major item

Model	*Line item No.*	*Federal stock No.*
M486	4–60964–01	1450–629–9652

General

TRUCK, GUIDED MISSILE REPAIR PARTS, BULK MATERIAL: M486, w/e is a modified TRUCK, CARGO: 2½-ton, 6 x 6, M35* designed to store and transport packaging and preservation materials. This truck is equipped with a detachable housing assembly, rack assemblies, a work bench, and storage cabinets. The truck also contains the necessary facilities for properly preserving and storing parts of the Redstone missile.

Differences among models

Data plate location

Classification: Standard B (OTCM 37334)

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	22 ft, 4¾ in.
Width	8 ft, 3½ in.
Height	9 ft, 6½ in.
Volume	1770 cu ft
Gross weight	12,460 lb
Ship tons	44.25

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:

---

* For characteristics and data, see item in section 21.

TRUCK, GUIDED MISSILE REPAIR PARTS: M488, W/E

Major item

Model	*Line item No.*	*Federal stock No.*
M488	4-60960-01	1450-629-9698

General

Differences among models

Data plate location

Classification: Standaru B (OTCM 37334).

CHARACTERISTICS

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length.....22 ft, 4⅝ in.
Width.....8 ft, 3⅛ in.
Height.....9 ft, 6⅛ in.
Volume.....1770 cu ft
Gross weight.....15,000 lb
Ship tons.....44.25

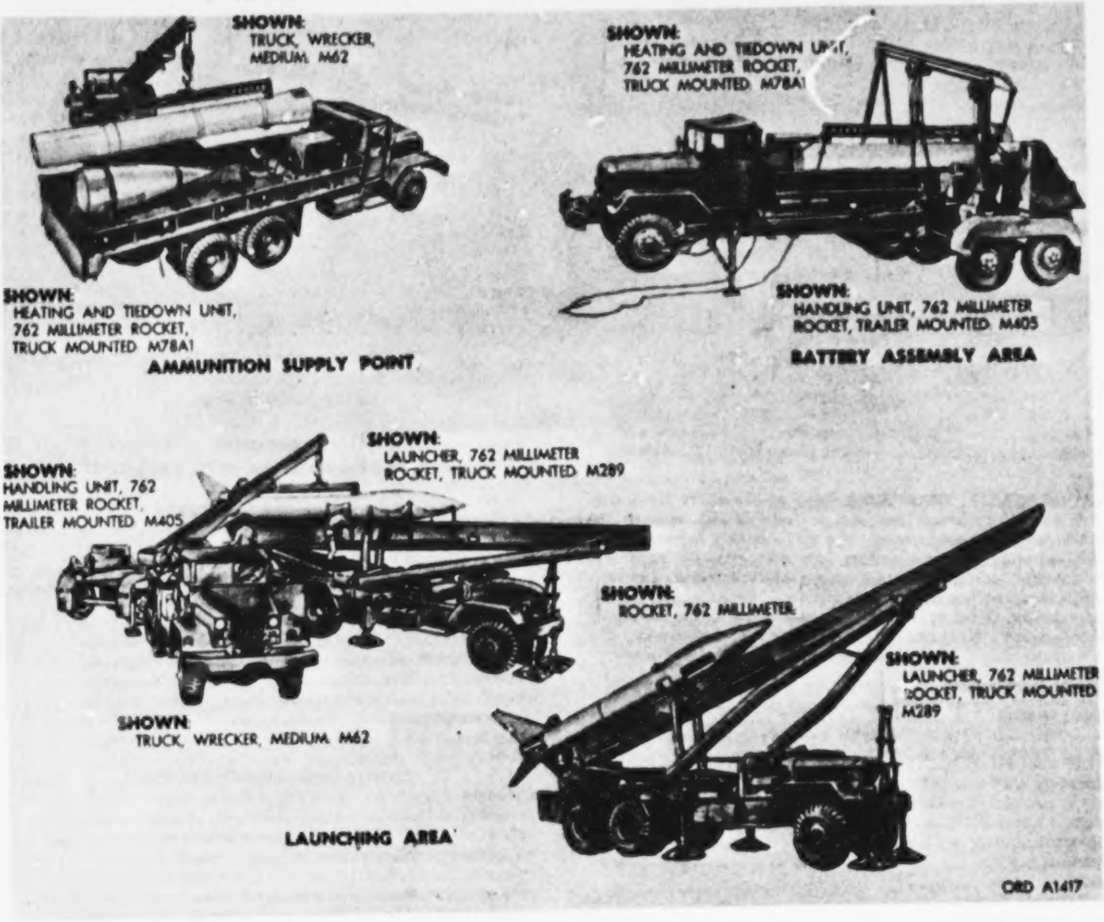
Outside Continental United States

Shipped
Length.....
Width.....
Height.....
Volume.....
Gross weight.....
Ship tons.....

References:

HONEST JOHN ROCKET SYSTEM

(Includes rockets; launchers; specially designed trailer for use in transporting rocket; and rocket handling and servicing equipment)


SHOWN: TRUCK, WRECKER, MEDIUM M62
SHOWN: HEATING AND TIEDOWN UNIT, 762 MILLIMETER ROCKET, TRUCK MOUNTED M78A1
AMMUNITION SUPPLY POINT
SHOWN: HEATING AND TIEDOWN UNIT, 762 MILLIMETER ROCKET, TRUCK MOUNTED M78A1
SHOWN: HANDLING UNIT, 762 MILLIMETER ROCKET, TRAILER MOUNTED M405
BATTERY ASSEMBLY AREA
SHOWN: LAUNCHER, 762 MILLIMETER ROCKET, TRUCK MOUNTED M289
SHOWN: HANDLING UNIT, 762 MILLIMETER ROCKET, TRAILER MOUNTED M405
SHOWN: ROCKET, 762 MILLIMETER
SHOWN: LAUNCHER, 762 MILLIMETER ROCKET, TRUCK MOUNTED M289
SHOWN: TRUCK, WRECKER, MEDIUM M62
LAUNCHING AREA

ORD A1417

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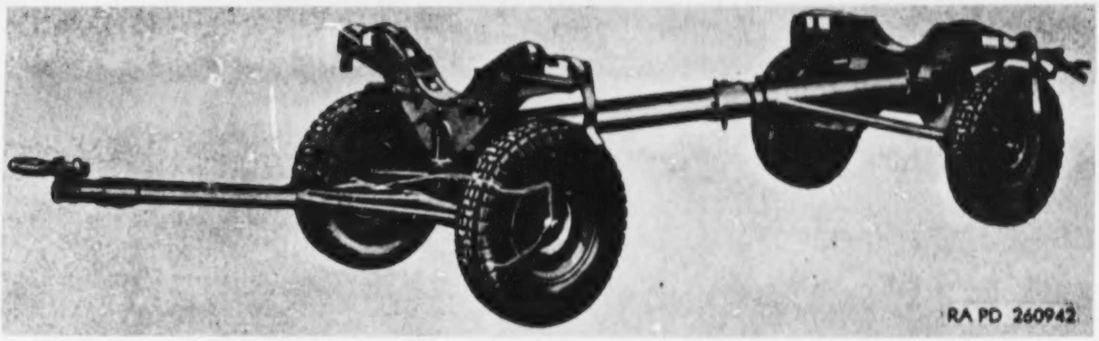
TRUCK, WRECKER, MEDIUM: M62
(For data and characteristics, see item in section 21.)

CART ASSEMBLY, TRANSPORT, 762-MM ROCKET: M465



Major item

Model	*Line item No.*	*Federal stock No.*
M465 w/e	9-40745 (Temp.)	1055-440-8834

General

CART ASSEMBLY, TRANSPORT, 762-MM ROCKET: M465, w/e, is a four-wheeled adjustable cart used to assemble and transport the rocket and/or rocket components. The cart assembly is composed of drawbar and rotating lever assemblies, axle locking handle, handbrake lever assemblies, locking toggle assemblies, positioning lockpin assembly, retaining straps, holddown straps, and sling lifts. When the cart assembly is fully extended, it accommodates the rocket motor or the completely assembled rocket. When the cart is retracted, it accommodates the rocket warhead, provided the warhead is installed in the warhead cradle.

Differences among models

Data plate location

The identification plate for the rocket transport cart assembly M465 is located on the front saddle and roller assembly.

Classification:

CHARACTERISTICS

Weight	850 lb
Height	41.5 in.
Width	72 in.
Length:	
Retracted position	147 in.
Extended position	185.5 in.
Road clearance	10 in.
Tire size and type	700x16, 6 ply
Tire pressure	55 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-204-12, C2, Appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

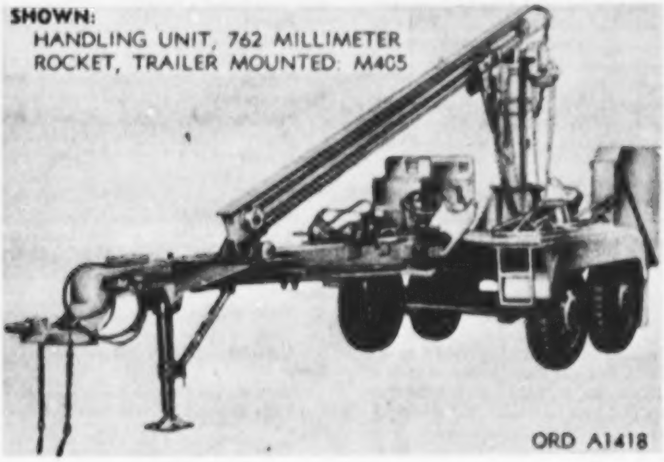
Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Reference: TM 9-1055-204-12

HANDLING UNIT, 762-MM ROCKET, TRAILER MOUNTED M405, W/E, AND M405A1



SHOWN:
HANDLING UNIT, 762 MILLIMETER ROCKET, TRAILER MOUNTED: M405

ORD A1418

Major item

Model	*Line item No.*	*Federal stock No.*
M405 w/e	4-17525-04	1055-630-5603
M405A1		1055-790-8768

General

HANDLING UNIT, 762-MM ROCKET, TRAILER MOUNTED: M405, is a four-wheel vehicle designed to transport the 762-mm rocket from the assembly area to the launching site and to serve as an assembly platform for the rocket. It is equipped with a mobile chain hoist attached to an I-beam, mounted on a hydraulic column, and is capable of transferring the rocket components from the heating and tiedown unit or the ground to the handling unit, and return, or a complete rocket from the rocket handling unit to the launcher and return.

The basic trailer consists primarily of a frame and reach assembly, a tandem suspension assembly, "air-over-hydraulic" service brakes, parking brakes (rear axles only), four wheels, a landing jack, and a lighting system. A standard Ordnance lunette is mounted on the front of the reach for use with a standard Ordnance pintle.

The handling unit has a rocket fin stowage box, a spare wheel and tire carrier assembly, engine generator, fire extinguisher system, auxiliary electrical system, and three saddle assemblies to support the rocket during assembly and transport.

The rocket handling system consists basically of a hydraulic column group, traversing beam, chain hoist, and traversing beam drive assembly. The rocket handling is performed manually.

Differences among models

Handling unit M405A1 has a safety device attached to chain hoist; M405 does not. A covered driving gear, an idler, and a driven gear transfer the traversing force to the traverse chain sprocket wheels on handling unit M405A1; in place of sprocket-and-chain drive covered by a guard used on M405. The hydraulic lift assembly on handling unit M405A1 is shorter and more simple in design than the piping on the M405. A new hydraulic oil filter is secured to the left side of the pedestal assembly on the M405A1. Pump and filter are exposed on M405 but shielded on the M405A1. The lighting system on the M405A1 includes a blackout stoplight which is not present on the M405. The beam idler assembly on the M405A1 has been redesigned.

Data plate location

The identification plate is located on the right front forward portion of the reach near the jack.

Classification

M405 w/EGP	STD-B (OTCM 37426)
M405A1	STD-A (OTCM 37426)

CHARACTERISTICS

Weights:	
Net	8,630 lb
Payload	6,000 lb
Gross	14,630 lb
Towing facilities	lunette
Length	28 ft, $1\frac{1}{8}$ in.
Width	8 ft
Height:	
Normal	10 ft, $9\frac{1}{8}$ in.
Air delivery	(approx.) 81 in.
Track tread-center-to-center of tires	6 ft, 8 in.
Axle:	
Type	tubular
Manufacturer	Ordnance Standard 10,000 lb
Diameter	$4\frac{1}{8}$ in.
Number	2
Service Brakes:	
Actuation	air-over-hydraulic
Type of brake mechanism	two-shoe, anchor support, two expanding cylinder actuation
Manufacturer	Wagner Elec. Corp.
Diameter	15 in.
Width	$3\frac{11}{16}$ in.
Operating air pressure	100 psi
Parking Brakes:	
Manufacturer	Houdaille-Herschey
Type	hand-operated
Application	rear wheels only
Jack:	
Type	hinged screw adjustable
Manufacturer	Homan
Length extended	$36\frac{3}{8}$ in.
Length retracted	$22\frac{1}{8}$ in.
Width of foot	10 in.
Length of foot	10 in.
Lights:	
Voltage	24
Lamps:	
In blackout taillight and stop light assembly:	
Blackout tail	3 cp
Blackout stop	3 cp
In service taillight and stop blackout taillight assembly:	
Blackout tail	3 cp
Service stop	3 cp

CHARACTERISTICS—Continued

Tires:	
Number	5
Type	military pneumatic
Size	9.00 x 20
Design	cross-country nondirectional
Number of plies	8
Tire inflation:	
Highway driving	40 psi
Cross-country driving	48 psi
Sand driving	32 psi
Engine Generator Set:	
Manufacturer	Onan
Model	305 ACK99E/1056C
Type	4 cycle gasoline
Cooling system	air cooled
Bore and stroke	3 x 2¾
No. of cylinders	2
Horsepower	11.4
Firing	360° apart
Valve clearance	0.006–0.0008
Piston displacement	38.8 cu in.
Compression ratio	6.25 to 1
Speed (full load)	2,250 rpm
Rotation of crankshaft	clockwise
Oil capacity	3 qt
Oil pressure (at 2,500 rpm)	30 lb
Fuel octane rating	80
Fuel tank capacity	10 gal
Carburetor:	
Manufacturer	Tilotson
Type	TL 1129–R
Magneto:	
Manufacturer	Fairbanks-Morse
Type	radio shield
Model No	FM PEI–ZB69D
Contact point:	
Set gap	0.020 in.
Governor:	
Manufacturer	Onan
Speed:	
Full load	(approx.) 2,225 rpm
No load	(approx.) 2,350 rpm
Type	fly ball with vacuum booster
Fuel pump:	
Manufacturer	Onan
Manufacturers number	149C543
Spark plugs:	
Thread	18 min
Spark plug gap	0.035 in.
Manufacturer and Model No	Champion XE H8
Oil filter:	
Manufacturer and Model No	CanoGWO–12567
Type	disk type
Air cleaner:	
Manufacturer and Model No	Onan 140C456
Type	oil bath
Generator:	
Manufacturer	Onan
Type	4-pole revolving armature
Alternating current	3,500-watt, 115-volt, 75-cycle, single phase
Direct current	1,500-watt, 30-volt
Start circuit	separate series field winding by use of 24-volt battery
Drive	direct to engine crankshaft
Armature make	Onan
Hydraulic Lift Cylinder:	
Type	single acting
Bore and stroke	2½ x 37 in.
Outer Lift Cylinder:	
Type	Telescoping
Length extended	113 in.
Length collapsed	76 in.
Diameter, inside	8 in.
Reservoir capacity	3 gal
Hydraulic piping assembly:	
Pump:	
Manufacturer	Harvill
Capacity	1⅓ cu in./cycle
Type	hand operated
Valve, four-way:	
Manufacturer	Adel
Type	4-way
Valve, relief:	
Manufacturer	Waterman
Type	adjustable relief
Pressure fitting	2,850 to 2,875 psi
Filter:	
Manufacturer	Waterman
Type	in line
Hoist:	
Manufacturer	Chester
Type	chain, manually operated
Capacity	3 ton
Drive:	
Type	Worm and gear
Ratio	30 to 1
Beam:	
Type	I-beam, 10 in.
Length, overall	18 ft, 4 in.
Length, between supports	14 ft, 4 in.
Chain, Drive:	
Type	⅝ in. single roller
Length	340.6 in.
Number of links	545
Frame, traversing Beam:	
Length extended	12 ft, 3 in.
Length collapsed	8 ft, 8 in.

PERFORMANCE

Maximum load	6,000 lb
Speed (max. load)	45 mph
Speed (irregular terrain)	15 mph

EQUIPMENT

Basic Issue Items: See TM 9–1055–208–12, Appendix III.

INSTRUCTIONAL MATERIAL

PRIME MOVER

5-ton, 6 x 6.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

References: TM 9–1055–208–15, TM 9–1055–208–12.

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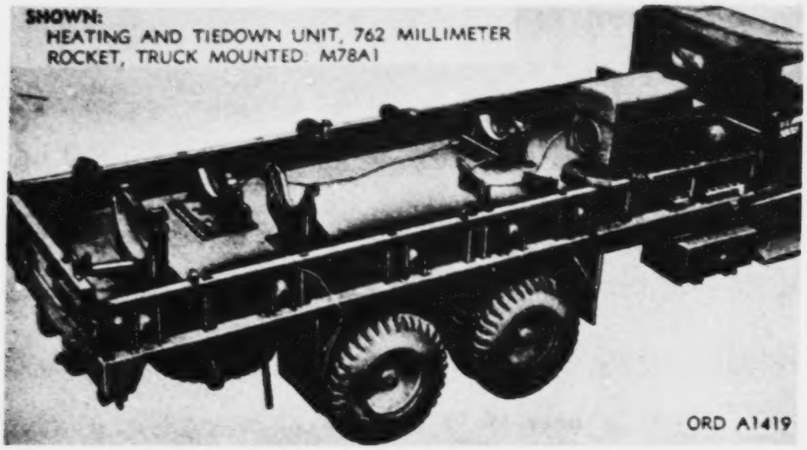
HEATING AND TIE DOWN UNIT, 762-MM ROCKET, TRUCK-MOUNTED: M78 and M78A1



SHOWN:
HEATING AND TIEDOWN UNIT, 762 MILLIMETER ROCKET, TRUCK MOUNTED: M78A1

ORD A1419

Model	*Line item No.*	*Federal stock No.*
M78	4-17779-02	1055-608-1883
M78A1	4-17779-03	1055-614-7264

General

HEATING AND TIE DOWN UNIT, 762-MM ROCKET, TRUCK-MOUNTED: M78A1, is composed of the 762-mm rocket heating and tie-down kit and the TRUCK, CARGO: 5-ton, 6 x 6, M55*. The kit consists of an engine-generator housing assembly containing a gasoline engine generator set M25, one front and one rear warhead saddle assembly, one front and one rear rocket motor saddle assembly, three container supports mounted in the truck, and five socket and support assemblies mounted on the right side of the truck. The unit is designed to transport the 762-mm rocket M31A1 or M31A1C from the ammunition supply point to the assembly and transport section either in containers or mounted on the saddles. During travel, the engine generator set M25 supplies alternating current for heating the 762-mm rocket electric blanket M2. It also supplies direct current for operating the Sandia tester and special warhead assembly.

Differences among models

Data plate location

The truck-mounted 762-mm rocket heating and tiedown unit M78A1 identification plate is located on the left rear portion of the warhead rear saddle assembly.

Classification:

M78	
M78A1	Standard A (OTCM 37119)

CHARACTERISTICS

Gasoline Engine Generator Set M25:

Manufacturer and Model	Onan 305 ACK-99E/1056C
Engine type	L-head, four stroke cycle, gasoline
Generator	four pole, revolving armature
Cooling system	air cooled
Ignition current	magneto automatic spark retard
Number of cylinders	opposed, two cylinders
Speed	2,250 rpm
Oil capacity	3 qt
Oil pressure (at 2,250 rpm)	30 lb
Fuel supply	10 gal fuel tank
Fuel octane rating	80
Spark plug gap	0.035 in.
Alternating current	3,500-watt, 115-volt, 75-cycle, single-phase
Direct current	1,500-watt, 30-volt

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-203-15, appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: TM 9-1055-203-15.

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* For characteristics and data, see item in section 21.

ROCKET, 762-MM: M31A1, M31A1C, AND M31A2

SHOWN:
ROCKET, 762 MILLIMETER M31A2

ORD A1420

Model	*Line item No.*	*Federal stock No.*
M31A1		
M31A1C		
M31A2		

General

ROCKET, 762-MM: M31 series, is a large caliber, field artillery, free-flight, fin-stabilized rocket designed to be fired from a rail-type launcher against terrestrial targets. The assemblies and components required to assemble one complete 762-mm rocket with a high-explosive warhead are stored, issued, and shipped in three containers: a rocket motor, a loaded warhead assembly, and fins. The rocket motor M31A1 or M3A1C is that portion of the rocket which houses the propellant, the spin rockets, and the ignition system. Four fins are attached to the fin base fittings which are located 90° apart on the nozzle of the rocket motor. The warhead assembly for the 762-mm rocket is the foremost portion of the complete round, serves as a housing for the warhead and necessary fuzing, and provides a streamlined surface to improve the ballistic trajectory of the rocket.

ROCKET, 762-MILLIMETER: M31A1, consists of rocket motor M3A1, 762-mm rocket flash-smoke warhead assembly M1A2 or 762-mm rocket flash-smoke warhead assembly XM38E1 or 762-mm rocket high-explosive warhead assembly M1A2, and 762-mm rocket fin M136A1 or 762-mm rocket fin M136A2 or 762-mm rocket fin M136A2B1.

ROCKET, 762-MILLIMETER: M31A1C, consists of rocket motor M3A1C, 762-mm rocket flash-smoke warhead assembly M1A2 or 762-mm rocket flash-smoke warhead assembly XM38E1 or 762-mm rocket high-explosive warhead assembly M1A2, and 762-mm rocket fin M136A1 or 762-mm rocket fin M136A2 or 762-mm rocket fin M136A2B1.

ROCKET, 762-MILLIMETER: M31A2, consists of rocket motor M3A2, 762-mm rocket flash-smoke warhead assembly M1A2 or 762-mm rocket flash-smoke warhead assembly XM38E1 or 762-mm rocket high-explosive warhead assembly M1A2, and 762-mm rocket fin M136A1 or 762-mm rocket fin M136A2 or 762-mm rocket fin M136A2B1.

Differences among models

Data plate location

Identification plates are located on the rocket motor, nose-shell assembly, and fins.

Classification:

M31A1	Standard B (OTCM 37119)
M31A1C	Standard A (OTCM 37468)
M31A2	Standard A (OTCM 37468)

CHARACTERISTICS

Complete-Round Rockets M31A1, M31A1C, and M31A2	
Diameter: (maximum, excluding fins and launching shoe)	30 in.
Fin span	104 in.
Length	327 in.
Gross weight	5,913 lb
Warhead Assembly M1A2 (Rocket M31 series)	
Diameter (maximum)	30 in.
Length (overall)	115 in.
Weight	1,634 lb
Warhead installed:	
Flash-smoke XM4E3, explosive weight	72 lb
Flash-smoke XM4E4, explosive weight	4 lb
High-explosive T39E4, explosive weight	412 lb
Rocket Motors M3A1, M3A1C, and M3A2	
Diameter (maximum)	27.7 in.
Length	212 in.
Weight	4,109 lb
Explosive weight	2,063 lb
Firing-temperature limits:	
M3A1	0° to +100° F.
M3A1C and M3A2	0° to +120° F.
Handling and shipping-temperature limits	0° to +120° F.
Rocket Igniters M35, M35C, M35A1, and M35A2	
Diameter:	
M35, M35C, and M35A1	6.8 in.
M35A2	9 in.
Length:	
M35 and M35C	4.6 in.
M35A1	4.7 in
M35A2	5.2 in.
Explosive weight	3.3 lb
Firing temperature limits:	
M35	0° to 100° F.
M35C, M35A1, and M35A2	0° to 120° F.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1340-202-12, appendix III

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

762-mm Rocket Motor M8A1

Shipped 1 rocket motor per container	wooden container	plywood container
Length	19 ft, 11⅛ in.	19 ft, 7 in.
Width	3 ft, 5⅛ in.	3 ft, 6⅛ in.
Height	4 ft, 1 in.	3 ft, 11 in.
Volume	281.85 cu ft	269.26 cu ft
Gross weight	6,538 lb	5,972 lb
Ship tons	7.046	6.732

762-mm Rocket Motor M8A1C

Shipped 1 rocket motor per container	wooden container	plywood container
Length	19 ft, 11⅛ in.	19 ft, 7 in.
Width	3 ft, 5⅛ in.	3 ft, 6⅛ in.
Height	4 ft, 1 in.	3 ft, 11 in.
Volume	281.85 cu ft	269.26 cu ft
Gross weight	6,538 lb	5,972 lb
Ship tons	7.046	6.732

762-mm Rocket Motor M8A2

Shipped	
Length	19 ft, 11 in.
Width	3 ft, 6⅛ in.
Height	4 ft, 1 in.
Volume	269.26 cu ft
Gross weight	5,972 lb
Ship tons	6.732

762-mm rocket fin M136A1

Shipped 4 fins per box	plywood box	wood box
Length	4 ft, 3 in.	5 ft, ⅝ in.
Width	1 ft, 5 in.	1 ft, 4¹¹⁄₁₆ in.
Height	4 ft, 2⅜ in.	4 ft, 1¹¹⁄₁₆ in.
Volume	25.33 cu ft	29.16 cu ft
Gross weight	280 lb	345 lb
Ship tons	0.633	0.729

762-mm Rocket Fin M136A2

Shipped 4 fins per box	plywood box	wood box
Length	4 ft, 2 in.	5 ft, ⅝ in.
Width	1 ft, 3⅛ in.	1 ft, 4¹¹⁄₁₆ in.
Height	4 ft, 5⅛ in.	4 ft, 1⅝ in.
Volume	24.0 cu ft	23.16 cu ft
Gross weight	396 lb	345 lb
Ship tons	0.6	0.729

762-mm Rocket Fin M136A2B1

Shipped 4 fins per box	plywood box	wood box
Length	4 ft, 2 in.	5 ft, ⅝ in.
Width	1 ft, 3⅛ in.	1 ft, 4¹¹⁄₁₆ in.
Height	4 ft, 5⅛ in.	4 ft, 1¹¹⁄₁₆ in.
Volume	24.0 cu ft	29.16 cu ft
Gross weight	396 lb	345 lb
Ship tons	0.6	0.729

762-mm Rocket Warhead Assembly M1A2

Shipped	
Length	12 ft, 2 in.
Width	4 ft, 1⅝ in.
Height	4 ft, 8⅛ in.
Volume	236.9 cu ft
Gross weight	3,410 lb
Ship tons	5.922

762-mm Rocket Warhead Assembly XM38E1

Shipped	
Length	19 ft, 11⅛ in.
Width	3 ft, 8¹¹⁄₁₆ in.
Height	4 ft, 2⅜ in.
Volume	181 cu ft
Gross weight	2,898 lb
Ship tons	4.525

Outside Continental United States

762-mm Rocket Motor M8A1

Shipped	
Length	19 ft, 11⅛ in.
Width	3 ft, 8¹¹⁄₁₆ in.
Height	4 ft, 2⅜ in.
Volume	181 cu ft
Gross weight	2,898 lb
Ship tons	4.525

762-mm Rocket Motor M8A1C

Shipped	
Length	19 ft, 7 in.
Width	3 ft, 6⅛ in.
Height	3 ft, 11 in.
Volume	269.26 cu ft
Gross weight	5,972 lb
Ship tons	6.732

762-mm Rocket Motor M8A2

Shipped	
Length	19 ft, 11 in.
Width	3 ft, 6⅛ in.
Height	4 ft, 1 in.
Volume	269.26 cu ft
Gross weight	5,972 lb
Ship tons	6.732

762-mm Rocket Fin M136A1

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

762-mm Rocket Fin M136A2

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

762-mm Rocket Fin M136A2B1

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

762-mm Rocket Warhead Assembly M1A2

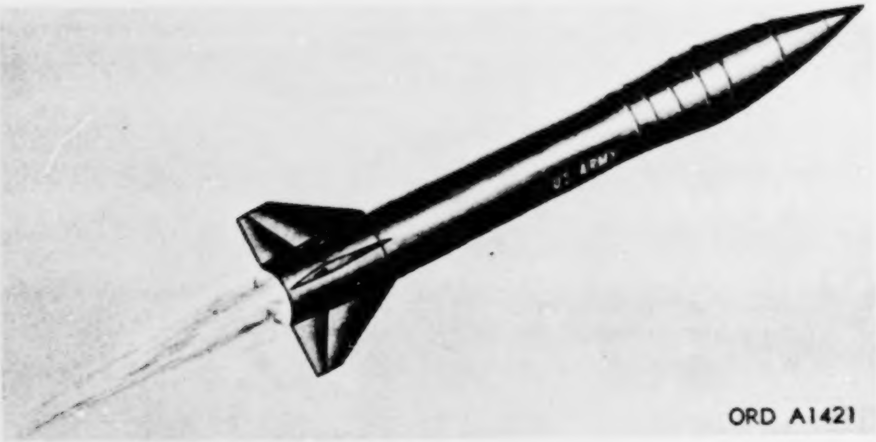
Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

762-mm Rocket Warhead Assembly XM38E1

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1340-202-12, TM 9-1055-202-10.

ROCKET, 762-MM: XM50



ORD A1421

Model	*Line item No.*	*Federal stock No.*
XM50		

General

ROCKET, 762-MM: XM50, is composed of warhead assembly, 762-MM Flash-Smoke: XM38E1 (with rocket fuse M421), and rocket motor XM66 which includes pedestal XM3E1, rocket motor XM31E2, and four fins XM17. The 762-mm rocket is a large caliber, field artillery, free-flight, fin-stabilized rocket designed to be fired from a rail-type launcher against terrestrial targets. The assemblies and components required to assemble one complete 762-mm rocket with a high-explosive warhead are stored, issued, and shipped in two containers: a rocket motor, a loaded warhead assembly, and fins. The rocket motor is that portion of the rocket which houses the propellant, the spin rockets, and the ignition system. Four fins are attached to the fin base fittings which are located 90° apart on the nozzle of the rocket motor. The warhead assembly for the 762-mm rocket is the foremost portion of the complete round, serves as a housing for the warhead and necessary fusing, and provides a streamlined surface to improve the ballistic trajectory of the rocket.

Differences among models

Data plate location

Instruction and nameplates are located on the rocket motor, nose-shell assembly, and fins.

Classification: Limited Production (OTCM 37178).

CHARACTERISTICS

Complete-round Rocket XM50	
Diameter: (maximum excluding fins and launching shoes)	2 ft, 6 in
Fin span	4 ft, 7⅝ in
Length	24 ft, 10⅓ in
Gross weight	4,719.1 lb
Warhead Assembly: XM38E1	
Diameter (maximum)	2 ft, 6 in
Length (overall)	9 ft, 7 in
Weight	1,625 lb
Explosive weight	3.0 lb
Rocket Motor XM66:	
Diameter (maximum, excluding fins and launching shoes)	2 ft, 3⅛ in
Length	15 ft, 3 in
Weight	3,103 lb
Explosive weight	3,094.1 lb
Firing-temperature limits	−30° to +100° F

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1340-202-12, appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

762-mm Rocket Motor XM166

Shipped	
Length	19 ft, 7 in.
Width	3 ft, 2 in.
Height	3 ft, 11 in.
Volume	242.88 cu ft
Gross weight	4,880 lb
Ship tons	6.072

762-mm Warhead Assembly XM38E1

Shipped	
Length	19 ft, 11⅓ in.
Width	3 ft, $8\frac{11}{16}$ in.
Height	4 ft, 2⅝ in.
Volume	181 cu ft
Gross weight	2,898 lb
Ship tons	4.525

Outside Continental United States

762-mm Rocket Motor XM166

Shipped	
Length	19 ft, 7 in.
Width	3 ft, 2 in.
Height	3 ft, 11 in.
Volume	242.88 cu ft
Gross weight	4,880 lb
Ship tons	6.072

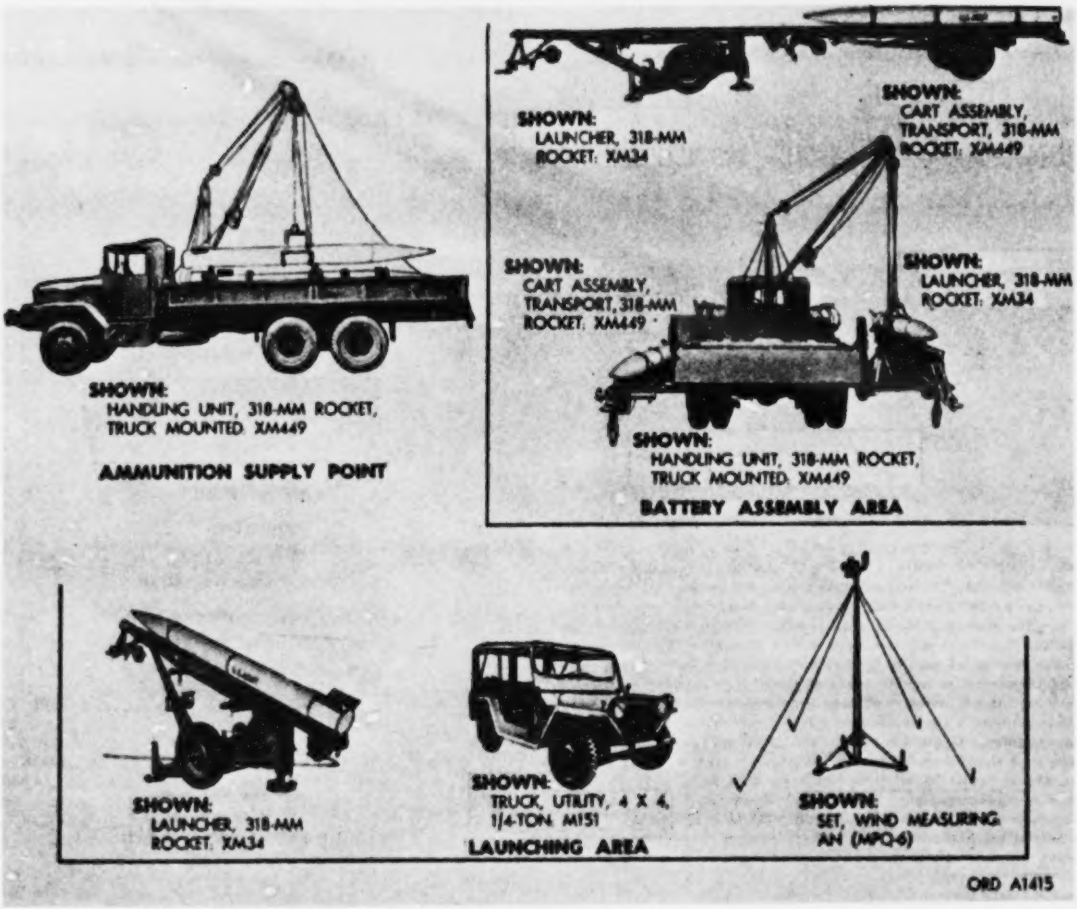
762-mm Warhead Assembly XM38E1

Shipped	
Length	19 ft, 11⅓ in.
Width	3 ft, $8\frac{11}{16}$ in.
Height	4 ft, 2⅝ in.
Volume	181 cu ft
Gross weight	2,898 lb
Ship tons	4.525

References: TM 9-1340-202-12, TM 9-1055-202-10.

LITTLE JOHN ROCKET SYSTEM

(Includes rockets; launchers; and rocket handling and servicing equipment)


SHOWN:
HANDLING UNIT, 318-MM ROCKET,
TRUCK MOUNTED: XM449
AMMUNITION SUPPLY POINT
SHOWN:
LAUNCHER, 318-MM
ROCKET: XM34
SHOWN:
CART ASSEMBLY,
TRANSPORT, 318-MM
ROCKET: XM449
SHOWN:
CART ASSEMBLY,
TRANSPORT, 318-MM
ROCKET: XM449
SHOWN:
LAUNCHER, 318-MM
ROCKET: XM34
SHOWN:
HANDLING UNIT, 318-MM ROCKET,
TRUCK MOUNTED: XM449
BATTERY ASSEMBLY AREA
SHOWN:
LAUNCHER, 318-MM
ROCKET: XM34
SHOWN:
TRUCK, UTILITY, 4 X 4,
1/4-TON: M151
LAUNCHING AREA
SHOWN:
SET, WIND MEASURING
AN (MPQ-6)

ORD A1415

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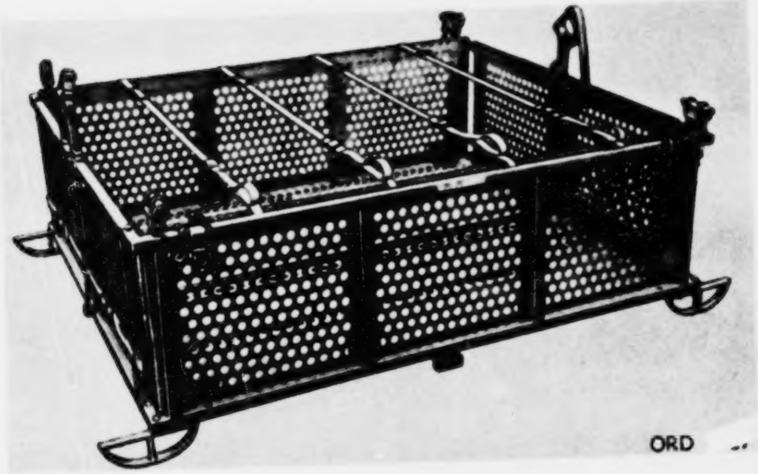
BASKET, DELIVERY, EQUIPMENT: XM1 19-231
CART ROCKET, TRANSPORT, 318-MM ROCKET: M14 19-232
HANDLING UNIT, ROCKET, TRUCK-MOUNTED 318-MM: M572 19-233
LAUNCHER, 318-MM ROCKET: XM32 (For data and characteristics see item in section 7)
LAUNCHER, 318-MM ROCKET: XM34 (For data and characteristics, see item in section 7.)
ROCKET, 318-MM: M51 19-234
SET, WIND MEASURING: AN/MPQ-6 (Responsibility of the Signal Corps Reference: TM 11-6660-203-10)
TRAILER, ROCKET, 318-MM: XM420 19-235
TRUCK, UTILITY: ¼-ton, 4 x 4, M151 (For characteristics and data, see item in section 21.)

BASKET, DELIVERY, EQUIPMENT: M1



Model	*Line item No.*	*Federal stock No.*
M1		

General

BASKET, DELIVERY, EQUIPMENT: M1, is a collapsible aluminum basket designed for helicpoter transport of the wind measuring set, suspension link assembly, aerial delivery cargo slings, and other handling and ancillary equipment. The basket consists of four end sections, two side sections, two floor sections, and a center support tube. A yoke and pin secured to each corner serve as attachments for the lifting sling. Cargo fastners attached along the upper edges of the sides prevent the sides from spreading. Skids mounted underneath each corner serve as legs to keep the basket off the floor.

Differences among models

Data plate location

The equipment delivery basket M1 identification plate is located on the upper left section of the front end of the basket.

Classification: Standard A (OTCM 37479)

CHARACTERISTICS

Weight	136 lb
Height	22.0 in.
Dimension	5 x 6 ft

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-212-12, appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

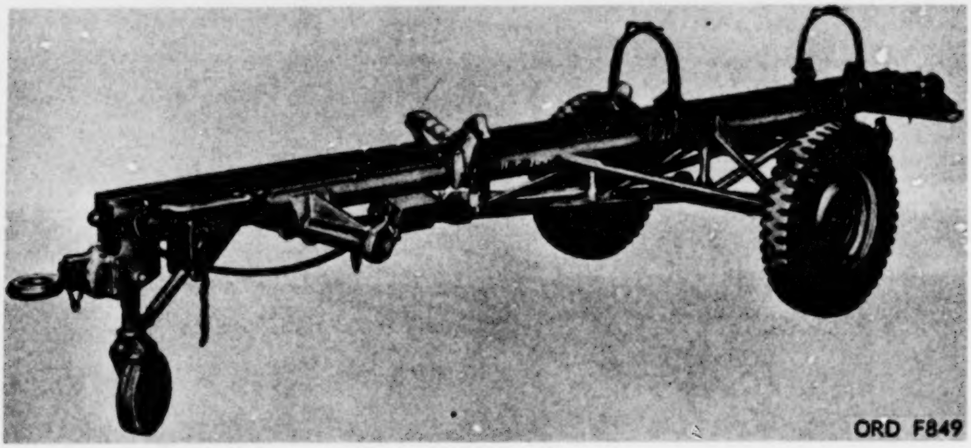
Shipped
Length……
Width……
Height……
Volume……
Area……
Gross weight……
Ship tons……

Outside Continental United States

Shipped
Length……
Width……
Height……
Volume……
Area……
Gross weight……
Ship tons……

References: TM 9-1055-212-12, TM 9-1055-212-35.

CART ROCKET, TRANSPORT, 318-MM ROCKET: M14



ORD F849

Major item

Model	*Line item No.*	*Federal stock No.*
M14, w/e	4-05277-10	1055-440-8826

General

CART ASSEMBLY, TRANSPORT, 318-MM ROCKET: M14 .w/e, is a two-wheeled cart designed for use in loading a rocket upon the 318-mm rocket launcher XM34, transporting a rocket on land, or transporting a rocket by helicopter. The trailer consists of an aluminum structural framework with a steel track bolted to its top to accommodate a rocket. A retractable caster assembly is attached at the front and a steel skid is mounted at the rear of the trailer. Two lateral tubular brackets are welded to the bottom of the trailer framework. These tubular brackets receive the tiebars when two trailers are joined together side-by-side for helicopter transport.

Differences among models

Data plate location

The rocket trailer M14 identification plate is located on the forward left side of the trailer on the brace support bracket for the caster wheel leg group T-shaped brace.

Classification: Standard A (OTCM 37861)

CHARACTERISTICS

Weight	610 lb
Length (pintle to lunette)	194.0 in.
Height	30.5 in.
Width	57.5 in.
Center-to-center of five treads	50.0 in.
Tire size	7:00 x 16
Tire pressure	28 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-212-12, appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

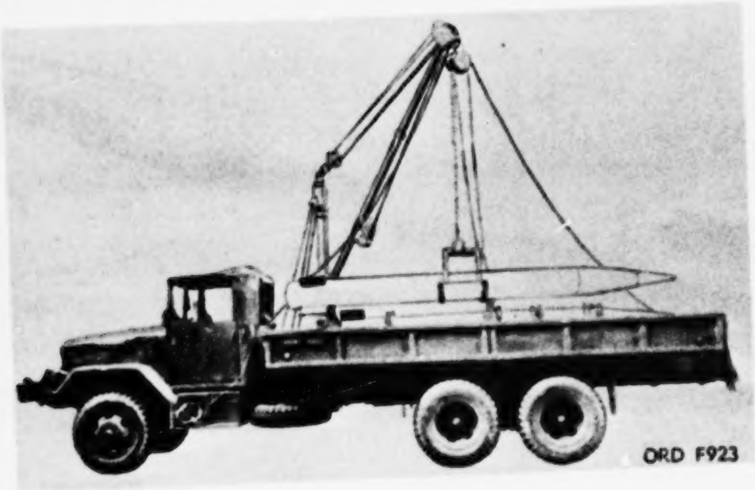
Shipped
- Length
- Width
- Height
- Volume
- Area
- Gross weight
- Ship tons

Outside Continental United States

Shipped
- Length
- Width
- Height
- Volume
- Area
- Gross weight
- Ship tons

References: TM 9-1055-212-12

HANDLING UNIT, ROCKET, TRUCK MOUNTED: 318-MM, M572



	Major item	
Model	***Line item No.***	***Federal stock No.***
M572, w/e	4-17521-10	1055-440-8835

General

HANDLING UNIT, ROCKET, TRUCK MOUNTED: 318-mm, M572 is designed to be used as a primary piece of equipment with the tripod and hoist assembly XM31 as a supplement. The handling unit consists of a vertical davit post with a boom-type crane and winch mounted thereon, called a rocket handling platform XM3. This platform is mounted in the front center portion of a TRUCK, CARGO: 2½-ton, 6 x 6, M36*. Four sets of saddles are mounted in the bed for transporting four rockets either mated or unmated. Two additional saddles are provided to be used on the side of the truck for installing the insulating blanket before the rocket or motor is placed in the truck. Also, a launcher can be loaded headed toward the front on one side of the truck, and a trailer loaded headed toward the rear of the opposite side of the truck. The truck can be transported any desired distance.

Differences among models

Data plate location

The rocket handling bar identification plate is located adjacent to the clamping section of the handle, which has the locking device for the bottom strap.

Classification: Standard A (OTCM 37861).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1055-212-12, Appendix III

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Reference: TM 9-1055-212-12

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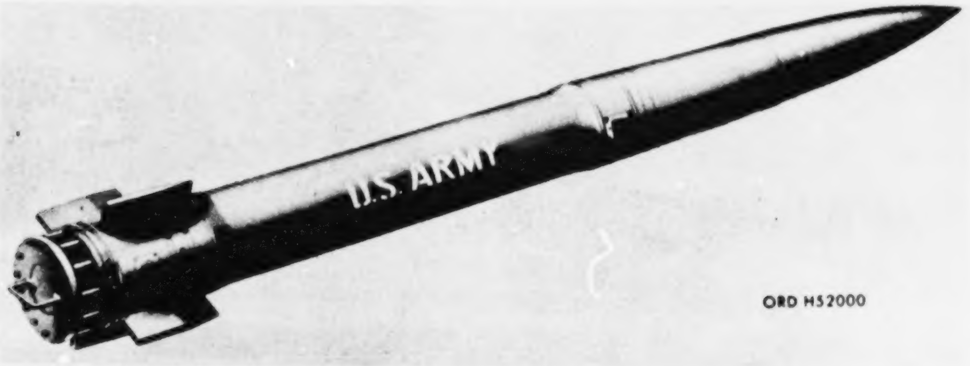
* For characterists and data, see item in section 21.

ROCKET, 318-MM: M51


ORD H52000

Model	***Line item No.***	***Federal stock No.***
M51		

General

ROCKET, 318-MM: M51, is a prespun, free-flight, fin-stabilized, field artillery rocket that follows a ballistic trajectory and is fired against ground targets from a straight-rail launcher. The rocket consists of a rocket motor M26, a flash-smoke warhead assembly M8, and an igniter assembly M57. The rocket motor contains a solid-propellant grain that provides the thrust energy for the rocket. The motor employs a front-shoe barrel assembly, a fin and fin barrel assembly, and four thrust radial bearings to allow the rocket to spin while it is on the launcher. The warhead assembly structure is an aluminum framework made up of formed aluminum skins and supporting frames. The warhead assembly consists of an aft section, midsection, two spotting charges, fuze M421, and forward section. The warhead assembly is attached to the rocket motor by a captive-locking ring which threads onto the threaded flange of the motor.

Differences among models

Data plate location

Identification plates and instruction plates for the rocket are located on the rocket motor and the warhead assembly.

Classification:

CHARACTERISTICS

Complete Round M51:	
Diameter (maximum)	12.5 in.
Length (as fired)	173.7 in.
Weight (as fired)	779 lb
Fin span	23.75 in.
Rocket Motor M26:	
Diameter (maximum)	12.5 in.
Length (w/o thrust neutralizer)	94.5 in.
Weight of propellent grain (w/inhibitor)	270.5 ±0.3 lb
Weight of propellent grain (w/o inhibitor)	254.6 ±0.1 lb
Firing-temperature limits	−10° to +210° F.
Storage-temperature limits	−65° to +120° F.
Explosive weight of igniter	380 gr
Warhead Assembly M8:	
Diameter (maximum)	12.5 in.
Length (overall)	79.2 in.
Weight	262 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-1340-204-12, appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Rocket Motor M26

Shipped 1 rocket motor M26 per storage and shipment container M455

Length	126 in.
Width	44 in.
Height	$38\frac{11}{16}$ in.
Volume	105.3 cu ft
Gross weight	1,375 lb
Ship tons	0.6875

Warhead Assembly M8

Shipped 1 warhead assembly M8 per storage and shipment container XM143

Length	100 in.
Width	28.38 in.
Height	34.25 in.
Volume	56.25 cu ft
Gross weight	982 lb
Ship tons	0.4901

Outside Continental United States

Rocket Motor M26

Shipped 1 rocket motor M26 per storage and shipment container M455

Length	126 in.
Width	44 in.
Height	$38\frac{11}{16}$ in.
Volume	105.3 cu ft
Gross weight	1,375 lb
Ship tons	0.6875

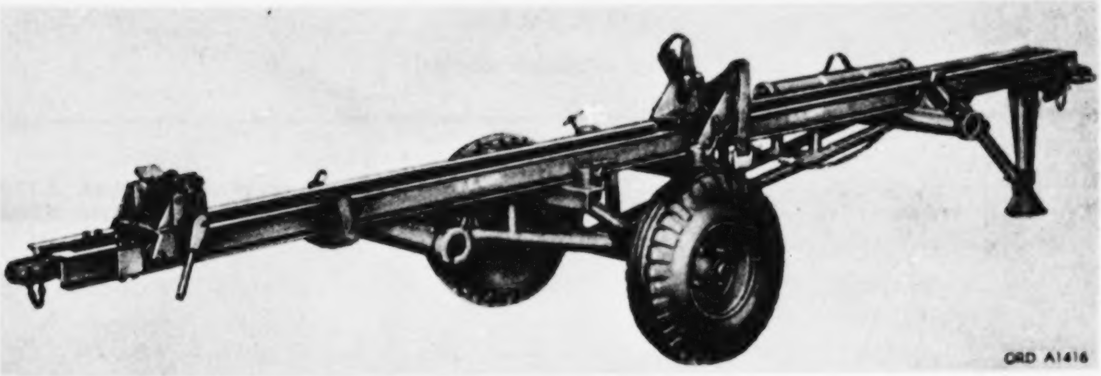
Warhead Assembly M8

Shipped

Length	100 in.
Width	28.38 in.
Height	34.25 in.
Volume	56.25 cu ft
Gross weight	982 lb
Ship tons	0.4901

Reference: TM 9-1340-204-12

TRAILER, ROCKET, 318-MM: XM420



ORD A1416

Model	*Line item No.*	*Federal stock No.*
XM420		

General

TRAILER, ROCKET, 318-MM: XM420, is a two-wheeled vehicle used for transport of 318-mm rocket XM47 from the assembly area to the launcher. The trailer consists of a welded frame, front and rear rocket saddle assemblies, lunette, front leg, two-wheel assemblies, and a pintle. A thermometer and case assembly, and a connecting bar assembly are stowed on brackets welded to the frame. The trailer is of aluminum construction and is designed so that two trailers, loaded with resupply rockets, can be fastened together and be transported to the launching site by helicopter. It can also be hand towed or be attached to a towing vehicle. Towing speeds are limited to not more than 20 mph on improved roads and 5 mph cross-country.

Differences among models

Data plate location

The identification plate for the rocket trailer XM420 is located on the right-rear connecting bar tube.

The warning plates are located on the sloping front surfaces of the launcher lunette bracket and at the upper front end of the trailer between the main channel members of the frame.

Classification:

CHARACTERISTICS

Weight	314 lb
Height	28 in.
Width	42 in.
Length	157 in.
Road clearance	9.25 in.
Tire size and type	6.00 x 9, 4 ply
Tire pressure	15 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-3162-12, appendix III.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, refer to DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Area
  Gross weight
  Ship tons

Outside Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Area
  Gross weight
  Ship tons

Reference: TM 9-3162-12

SECTION 20

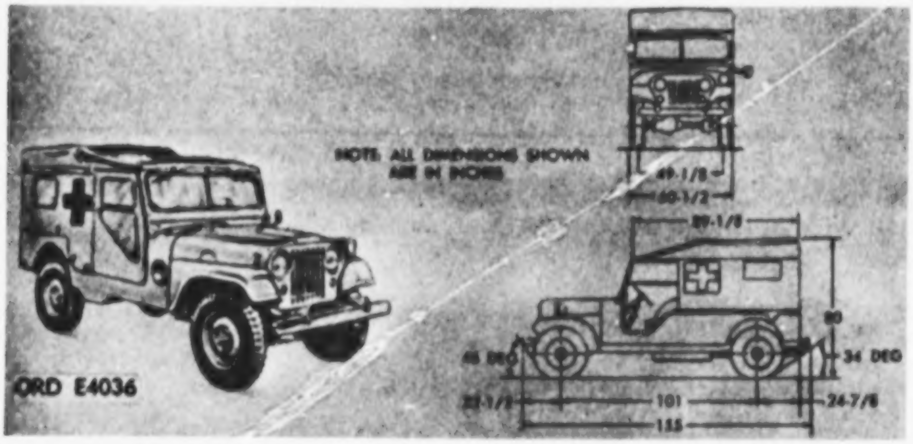
PASSENGER MOTOR VEHICLES

(CLASS 2310)

(Includes ambulance trucks)

Page
TRUCK, AMBULANCE: ¼-ton, 4 x 4, M170 front line, w/e 20–2
TRUCK, AMBULANCE: ¾-ton, 4 x 4, M43 and M4381 20–4

TRUCK, AMBULANCE: ¼-TON, 4 X 4, M170, FRONT LINE, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M170	4-59832-00	2310-835-8686

General

TRUCK, AMBULANCE: ¼-ton, 4 x 4, M170, front line, is a lightweight open-body, canvas-covered, four-wheel drive vehicle designed to transport ill or wounded personnel. When used with litters, it can accommodate three; when used for ambulatory personnel, it can accommodate six. The tailgate can be lowered to facilitate loading of the litters. The spare wheel is carried inside at the right side of the front passenger seat. The hand brake has been modified to avoid interference with the left lower litter. Additional facilities include crash pads and an interior emergency light.

Differences among models

Data plate location

The identification plate (nameplate) is located on the instrument panel at the right of the instrument cluster.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Crew	2
Length, overall	155 in.
Width	60½ in.
Height	79 in.
Weight (less litters):	
Net	2,963 lb
Payload	800 lb
Gross	3,763 lb
Rear axle gear ratio	5.38:1
Axles:	
Front:	
Type	hypoid, full-floating
Weight capacity:	
Empty	1,636 lb
Loaded	1,757 lb
Rear:	
Type	hypoid, semifloating
Weight capacity:	
Empty	1,327 lb
Loaded	2,006 lb
Tires:	
Ply	6
Size	7:00 x 16
Pressure	25 psi
Tread, center-to-center, front	49⅛ in.
Electrical system:	
Number of batteries	2
Volts	24
Type of ground	negative
Fuel octane rating	72
Capacities:	
Fuel	20 gal
Cooling system	11½ qt
Crankcase	5½ qt
Transmission	1 qt
Rear axle and front axle, each	1¼ qt
Brakes:	
Manufacturer	Bendix
Type	Hydraulic
Parking brake:	
Manufacturer	Timken
Type	duo-grip
Engine:	
Manufacturer, Willys	Model MD
Type	4 cycle "F" head
No. cylinders	(in line) 4
Displacement	134.2 cu in.
Bore	3⅛ in.
Stroke	4⅜ in.
Compression ratio	6.9:1
Governed speed	not governed
Brake horsepower (w/std accessories)	68 at 4,000 rpm
Torque (w/std accessories)	113 lb-ft at 2,000 rpm
Transmission:	
Type	syncromesh
Forward speeds	3
Gear ratio:	
High	1:1
Second	1.551:1
Low	2.798:1

PERFORMANCE

Computed grade ability lowest gear loaded	71.1 percent
Turning radius	24½ ft
Fording depth	18 in.
Fuel consumption, loaded	17.0 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	not governed

EQUIPMENT

Basic Issue Items: See TM 9-8014, C4

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped uncrated

Length	
Width	
Height	
Volume	433 cu ft
Area	66.7 sq ft
Gross weight	
Ship tons	

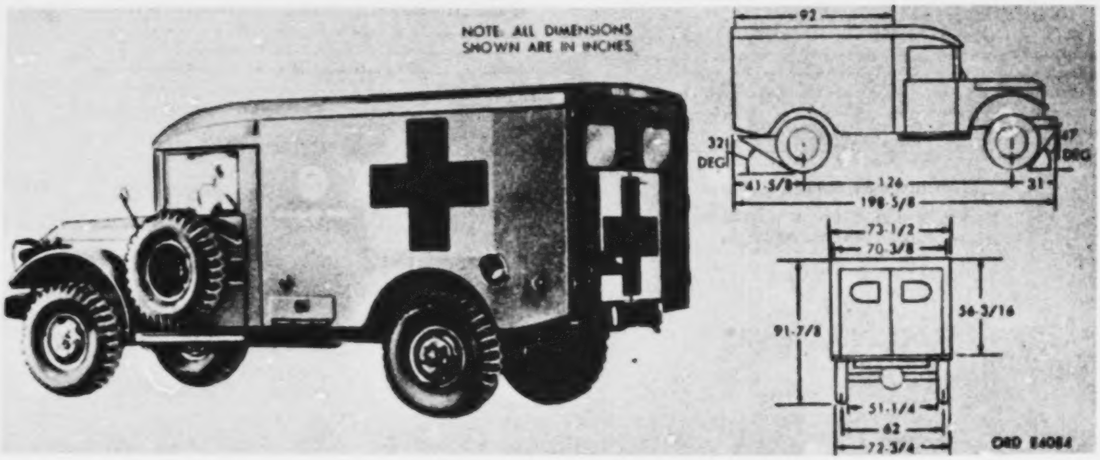
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-758, TM 9-8014, TM 9-8015

TRUCK, AMBULANCE: ¾-TON, 4 X 4, M43 and M43B1



Major item

Shown: Truck, Ambulance: ¾-ton, 4 x 4, M43

Model	*Line item No.*	*Federal stock No.*
M43, w/wn	4-59831-00	2310-835-8617
M43, w/o/wn	4-59830-40	2310-835-8516
M43B1, w/o/wn	4-59830-41	2310-542-4634

General

TRUCK, AMBULANCE: ¾-ton, 4 x 4, M43 and M43B1 are lightweight vehicles with a panel-type fully inclosed body mounted on a light truck chassis designed to transport ill or wounded personnel. Each vehicle is single-tired, four-wheel drive. When used for litter patients, four can be transported. Six ambulatory patients can be accommodated otherwise. Two rear doors are provided for access to patients' compartment and litters which is separated from the driver's compartment by a partition in which a door is mounted. The spare wheel and tire assembly is mounted on a swing-out carrier attached to the left-front cab door. An adjustable spotlight atop the cab can be controlled from inside the cab. A personnel heater (and surgical light) are provided for the patient's compartment.

Differences between models

The M43 is provided with a winch of 7,500-pound capacity mounted on the front of the vehicle. The M43B1 has an aluminum body instead of a steel body and is without a winch.

Data plate location

The identification plate (nameplate) is located on the instrument panel to the right of the instrument cluster.

Classification: M43—Standard B (OTCM 37926) M43B1—Standard A (OTCM 37926)

CHARACTERISTICS

Crew	2
Length, overall	198⅝ in.
Width	73½ in.
Height	91⅞ in.
Weight, net	
w/winch	8,780 lb
w/o/winch	8,550 lb
Payload	1,400 lb
Rear axle gear ratio	5.83:1
Chassis	M56
Body (4 litter)	insulated
Axles:	
Front:	
Weight capacity:	
Empty	3,300 lb
Loaded	3,600 lb
Rear:	
Weight capacity:	
Empty	3,850 lb
Loaded	5,300 lb
Type, live	hypoid, full floating
Tires:	
Ply	8
Size	9.00 x 16
Pressure	40 psi
Tread, center-to-center, front	62 in.
Electrical system:	
Number of batteries	2
Volts	24
Type ground	negative
Fuel octane rating	72
Capacities:	
Cooling system w/o heater	17 qt
Crankcase	5 qt
Differential	3 qt
Fuel tank	24 gal
Steering gear	1 pt
Axles	3 qt
Transmission	2½ qt
Winch clutch housing	1 qt
Winch worm housing	1 qt
Brakes:	
Manufacturer	Dodge
Type	hydraulic
Parking, type	transfer
Engine:	
Manufacturer, Dodge	Model T245
Type	4 cycle "L" head
No. cylinders	(in line) 6
Displacement	230.2 cu in.
Bore	3¼ in.
Stroke	4⅝ in.
Compression ratio	6.7:1
Governed speed	3,400 rpm
Brake horsepower (w/std accessories)	78 at 3,200 rpm
Torque (w/std accessories)	177 lb-ft at 1,200 rpm
Transmission:	
Type	synchromesh
Forward speeds	4
Gear ratio:	
High	1:1
Low	6.4:1

PERFORMANCE

Computed grade ability in lowest gear	68 percent
Turning radius	25 ft
Fuel consumption	9 mpg
Cruising range	225 mi
Allowable speed (governed)	55 mph
Fording depth:	
w/fording kit	84 in.
w/o/fording kit	42 in.

EQUIPMENT

Basic Issue Items: See TM 9–8030, C5

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	uncrated
Length	
Width	
Height	
Volume	790 cu ft
Gross weight	
Area	103 sq ft
Ship tons	

Outside Continental United States

Shipped	uncrated
Length	
Width	
Height	
Volume	
Volume	790 cu ft
Gross weight	
Area	103 sq ft
Ship tons	

References: SNL G741, TM 9–8030

SECTION 21

TRUCK AND TRUCK TRACTORS

(CLASS 2320)

(Includes military cargo carrying vehicles, truck chassis, amphibian personnel carrier, full-tracked recovery vehicles, tractor trucks, van trucks, and wrecker trucks)

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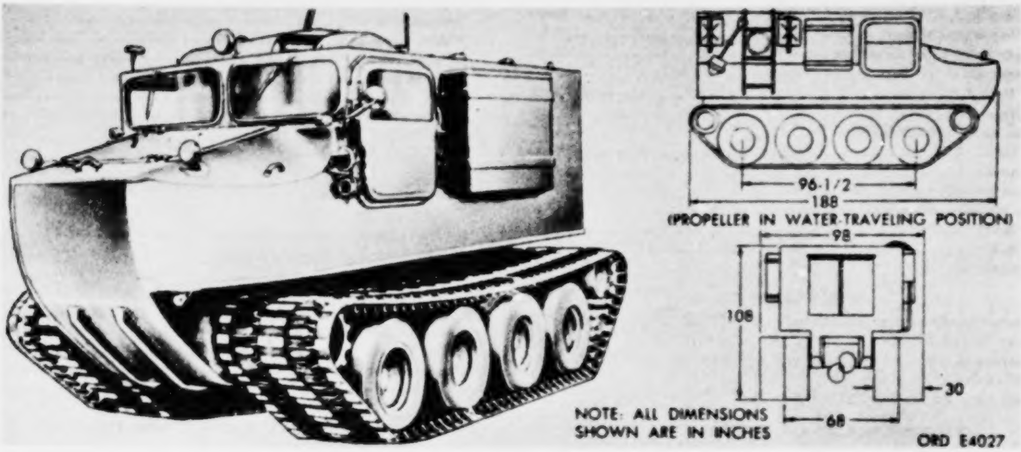
TRUCK, MAINTENANCE: earth boring machine and pole setter, 2½-ton, 6 x 6, V18A/MTQ 21-82A
TRUCK, MAINTENANCE: telephone construction and maintenance, 2½-ton, 6 x 6, V17A/MTQ 21-82C
TRUCK, PLATFORM, UTILITY: ½-ton, 4 x 4, M274 (See page 21-9).
TRUCK, TANK: gasoline, 2½-ton, 6 x 6, 1,200-gal. M49 and M49C, w/e 21-83
TRUCK, TANK: gasoline, 2½-ton, 6 x 6, 1,200 gal, M217 and M217C 21-85
TRUCK, TANK: water, 2½-ton, 6 x 6, 1,000-gal, M50, w/ and w/o winch 21-87
TRUCK, TANK: water, 2½-ton, 6 x 6, 1,000-gal, M222 21-89
TRUCK, TRACTOR: 2½-ton, 6 x 6, M48, w/ and w/o winch 21-91
TRUCK, TRACTOR, 2½-ton, 6 x 6, M221, w/ and w/o winch 21-93
TRUCK, TRACTOR: 2½-ton, 6 x 6, M275, w/ and w/o winch 21-95
TRUCK, TRACTOR: 5-ton, 6 x 6, M52 and M52A1, w/ and w/o winch 21-97
TRUCK, TRACTOR: 10-ton, 6 x 6, M123 and M123C, w/e 21-99
TRUCK, TRACTOR: 12-ton, 6 x 6, M26A1 21-101
TRUCK, TRACTOR, WRECKER: 5-ton, 6 x 6, M246, w/winch, w/e 21-103
TRUCK, UTILITY: ¼-ton, 4 x 4, M38, w/e 21-105
TRUCK, UTILITY: ¼-ton, 4 x 4, M38A1 and M38A1C, w/e 21-107
TRUCK, UTILITY: ¼-ton, 4 x 4, M151, w/e 21-109
TRUCK, UTILITY: ¼-ton, 4 x 4, lightweight, M422 21-111
TRUCK, VAN: expansible, 2½-ton, 6 x 6, M292 21-113
TRUCK, VAN: shop, 2½-ton, 6 x 6, M109, M109A1, M109C, and M109D, w/e 21-114
TRUCK, VAN: shop, 2½-ton, 6 x 6, M220C, and M220D 21-116
TRUCK, VAN: shop, 2½-ton, 6 x 6, M512, M512C, M512D, M512F, and M512G (See page 21-125).
TRUCK, WRECKER: crane, 2½-ton, 6 x 6, M108, w/winch, w/e 21-118
TRUCK, WRECKER: light, 2½-ton, 6 x 6, M160, w/winch, w/e 21-120
TRUCK, WRECKER: medium, 5-ton, 6 x 6, M62 and M62E1, w/winch, w/e 21-122
TRUCK, WRECKER: medium, 5-ton, 6 x 6, M543, w/front winch 21-124

Pages 21-3, 21-4, 21-5, and 21-6 are deleted by C 1.

CARRIER, CARGO, AMPHIBIOUS: M76, W/E


96-1/2
188
(PROPELLER IN WATER-TRAVELING POSITION)
98
108
30
68
NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD E4027

Major item

Model	***Line item No.***	***Federal stock No.***
M76	4-05172-00	2320-796-5986

General

CARRIER, CARGO, AMPHIBIOUS: M76, w/e, is a full-track-laying vehicle designed to transport general cargo and personnel on land or water.

The vehicle is identified by the high watertight inclosed sheet aluminum hull, wide rubber tracks with large pneumatic rubber tired road wheels. Also, a trapezoidal-shaped stack; located between the driver's and assistant driver's seats, is used for all engine air requirements. Engine and heater exhausts are also expelled through the stack.

The vehicle contains engine, crew, and cargo compartments. It is powered by a gasoline, 4-cylinder, opposed air-cooled engine. A cross drive-type torque converter transmission is mounted directly under the engine to form a unit powerplant. The transmission is designed to transmit engine power to the tracks, to provide steering control, service and parking brakes, and a power-take-off for marine drive or winch operation. It is also fully suppressed for radio installation.

Differences among models

The following changes have been made on the late production models.

The containers known as fuel cells have been moved further to the rear.

The fuel and water cans, spare wheel, pioneer kit, and shutter stowage cover have been moved to allow change in fuel cell location.

A folding propeller guard has been added.

The rear steps have been changed slightly.

The bilge pumps are driven by chains instead of gears and the piping is also different.

The rear suspension arm has been altered to give more and easier track adjustment.

The towing pintle is changed to a swivel type.

Data plate location

The identification plate (nameplate) is located on the stack wall, on driver's side to rear of warning plate.

Classification: Standard B (OTCM 37697).

CHARACTERISTICS

Crew	2
Passengers (including crew)	10
Length, overall (propeller in land travel position) (guard down)	199.4 in.
Length, overall (propeller in water travel position) (guard up)	188.4 in.
Width	98 in.
Height (with 3,000 lb load)	103.3 in.
Height	108 in.
Height (reducible)	92 in.
Weight, fighting (estimated)	12,162 lb
Net	8,813 lb
Payload	3,349 lb
Ground pressure	2.1 psi
Ground clearance (with 3,000 lb load)	16⅝ in.
Pintle height (loaded)	39⅝ in.
Electrical system	24 volts
No. of batteries	2
Type of batteries	2HN11-A
Fuel octane rating	80
Capacities:	
Fuel cells (two 35 gal)	70 gal
Crankcase, refill (without cooler, cores and lines)	12 qt
Transmission, refill (without cooler, cores and lines)	12 qt
Engine lubrication system (after drain)	12 qt
Engine lubrication system (refill dry)	16 qt
Transmission (fill from dry, including complete system, room temperature)	18 qt
Winch (refill) (at each end)	½ pt
Angle of approach	40¼°
Angle of departure	45½°
Tread (center to center of track)	68 in.
Width of track	30 in.
Wheelbase (length of track contact)	96½ in.
Transmission:	
Manufacturer	Pontiac Motor Div (GM Corp)
Model	CD-150-3
Type	cross-drive, torque converter, planetary geared
Brakes	hydraulic, multiple-disk, hand lever controlled
Ranges	low, high, and reverse
Final drive gear ratio	4.11:1
Engine:	
Manufacturer	Continental
Model	AOI-268-3A
Type	air-cooled, 4-cylinder, opposed
Displacement	269 cu in.
Bore	4⅝ in.
Stroke	4 in.
Compression ratio	6.9:1
Maximum governed speed (full load)	3,200 rpm
Brake horsepower, gross (max w/std accessories)	127 at 3,200 rpm
Torque, gross (max w/std accessories)	225 lb-ft at 2,600 rpm
Type of ignition	magneto

AMMUNITION

630 round cal. .50

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth	floats
Maximum vertical obstacle vehicle can climb	18 in.
Maximum width of ditch vehicle can cross	60 in.
Fuel consumption (average conditions):	
On land	2.3 mpg
In water	12 gph
Allowable speed recommended:	
On land	28 mph
In water	4½ mph
Maximum allowable towed load, gross	6,000 lb
Cruising range (average conditions):	
On land	160 mi
In water	5.8 hrs
Winch capacity	5,000 lb

EQUIPMENT

Armament: One MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible.

Communications: Radio sets and combinations (AN/GRC–3 or AN/GRÇ–9 or 19).

Basic Issue Items: See TM 9–7604, C2.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

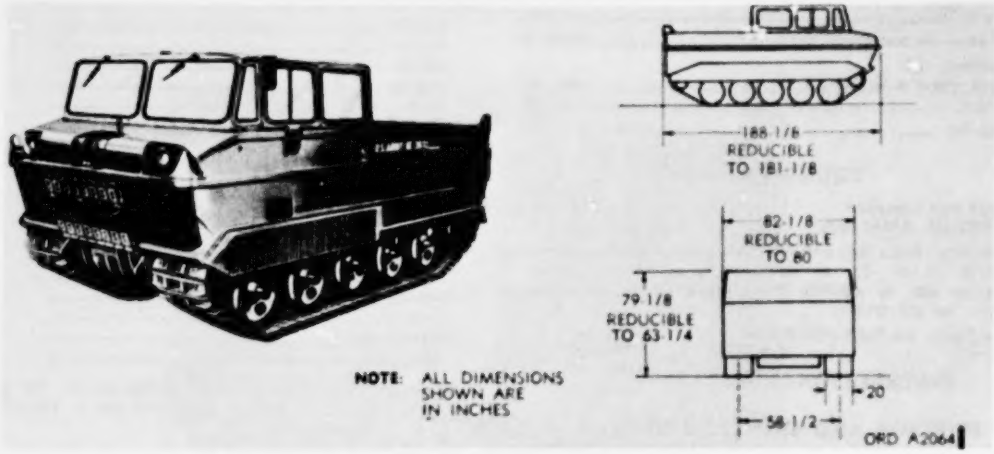
Shipped 1 vehicle uncrated:	
Length, overall	188.4 in.
Width, overall	98 in.
Height	108.3 in.
Max. height for air transport	92 in.
Area	132 sq ft
Volume	1,139 cu ft
Gross weight	12,162 lb
Ship tons	28.5

Outside Continental United States

Shipped 1 vehicle uncrated:	
Length, overall	
Width, overall	
Height:	
Overall	
Lowest operable	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9–7604, TM 9–2320–205–20P, SNL G–245.

CARRIER, CARGO, AMPHIBIOUS: TRACKED, M116 (T116E1)



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD A2064

Model	*Line item No.*	*Federal stock No.*
M116(T116E1)	4-05172-02	2320-411-2057

General

CARRIER, CARGO, AMPHIBIOUS: tracked, M116 (T116E1) is a lightweight, low-silhouette vehicle designed to transport cargo and/or personnel. The vehicle is capable of operation with full-rated load over unimproved roads, trails, hilly country, loose sand, snow, ice, unfrozen tundra, muskeg, soft marsh, rock strewn areas, and inland waterways under all seasonal conditions in arctic, temperate, and tropical zones. Movement of the tracks propels and steers the vehicle on both land and water. The low net weight of the vehicle enables it to be transported by cargo aircrafts and parachute dropped to using forces.

Differences among models

Data plate location

Classification: Standard A (OTCM 37620(C)).

CHARACTERISTICS

Crew (driver)	1
Passengers	11 to 13
Weight:	
Curb (including fuel, on-equipment material, and driver)	7,880 lb
Payload (cargo)	3,000 lb
Gross	10,880 lb
Length	188⅛ in.
Reducible to	181⅛ in.
Width	82⅛ in.
Reducible to	80 in.
Height	79⅛ in.
Reducible to	63¼ in.
Ground clearance	15½ in.
Ground pressure:	
At curb weight	1.9 psi
w/3,000 lb payload	2.6 psi
Tread, center to center of track	58½ in.
Pintle height	21 in.
Angle of approach	
Angle of departure	
Electrical system	24 volt
Number of batteries (12 volt)	4
Type of batteries	2HN
Fuel octane rating (min)	80
Capacities:	
Fuel	65 gal
Gas cans (total)	10 gal
Cooling system	27 qt
Crankcase, refill	6 qt
Transmission, refill	16 qt
Geared steering unit	10 qt
Engine:	
Manufacturer	Chevrolet
Model	Military version of 283 cu in. V-8
Type	overhead valve, liquid cooled, gasoline
Displacement	283 cu in.
Bore	3⅞ in.
Stroke	3 in.
Compression ratio	8:1
Maximum governed speed (full load)	4600 rpm
Brake horsepower, gross (max w/std accessories)	160 @ 4,600 rpm
Torque, gross (max w/std accessories)	210 lb-ft @ 2400 rpm
Transmission:	
Manufacturer	Detroit Transmission Div.
Model	305 MC
Type	hydramatic
Brakes	wet, multiple disc
Number of ranges	3 forward and reverse
Final drive gear ratio	4.17:1
Armament:	
RIFLE, 7.62 MILLIMETER: M14 [*]	1
Communication system	radio and interphone

AMMUNITION

7.62 MM	180 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	Pivot to infinity
Fording depth	Amphibious
Maximum verticle obstacle:	
Vehicle can climb	approx 18 in.
Maximum width of ditch:	
Vehicle can cross	approx 58 in.
Fuel consumption:	
On land	4 mpg
On water	approx ⅓ mpg

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[*] For characteristics and data, see item in sections 2 and 27.

Allowable speed, recommended:
On land .... 37 mph
On water .... 4 mph

Maximum allowable towed load, gross .... 2,400 lb

Cruising range:
On land (hard surface) .... 300 mi
On water .... approx 22 mi

Winch capacity .... 5,000 to 6,000 lb

EQUIPMENT

Sighting and Fire Control: *
BINOCULAR, M17A1, w/e

Communications: Radio Sets and Combinations AN/GRC-3 through AN/GRC-8, -9, or -19; or AN/GRR-5; or AN/JRC-9, -10, -18, -24, or -35; or AN/VR Q-1 through -3, with intercommunication set AN/U1C-1.

Basic Issue Items: See TM 9-2320-223-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 carrier, uncrated
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped 1 carrier, uncrated
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

References: LO 9-2320-223-12, TM 9-2320-223-10, TM 9-2320-20, TM 9-2320-223-20P, TM 9-2320-223-35, TM 9-2320-223-35P.

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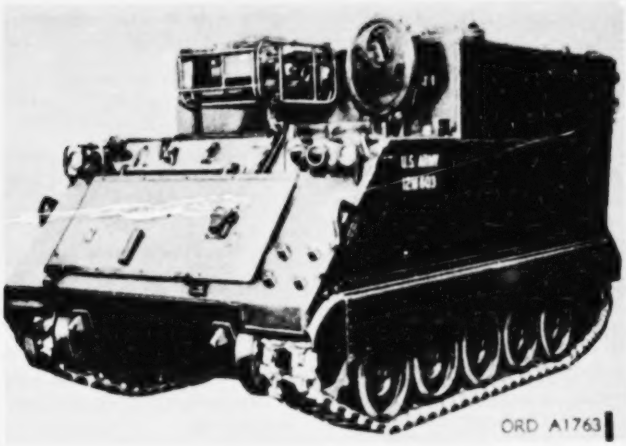
* For characteristics and data, see item in sections 2 and 27.

CARRIER, COMMAND POST: LIGHT TRACKED, M577 AND M577A1



ORD A1763

Model	*Line item No.*	*Federal stock No.*
M577	4-05205-10	2320 856-6624
M577A1		2320-056-6808

General

CARRIER, COMMAND POST: LIGHT TRACKED, M577 and M577A1 is a light, lightly armored, self-propelled, tracked vehicle providing approximately 47 square feet of floor space resembling the size and shape, and using the chassis of the CARRIER PERSONNEL, FULL TRACKED: ARMORED M113A1*. This mobile command post vehicle for use at division or lower levels may also be used as a fire direction center, communications vehicle, or as a mobile medical treatment facility. To the extent feasible it will replace standard tentage used for these purposes. The carrier is amphibious, has superior cross-country mobility, and is adaptable to multiple functions through the application of kits.

Differences among models.

The difference between the M577 and M577A1 is the engines and transmissions. The M577A1 is equipped with a diesel engine instead of a gasoline engine as in the M577.

Data plate location:

Data plates are located above the engine compartment door to the right of the driver, and on the right wall of the driver's compartment.

Classification:

M577—Standard B (AMCTCM W-740)
M577A1—Standard A (AMCTCM W-740)

CHARACTERISTICS

Crew	5
Length, overall	191½ in.
Width, overall	105¾ in.
Height, overall	101 in.
Track size and model:	
Tread (center to center of tracks)	84 in.
Angle of approach	70 deg
Angle of departure	40 deg
Type of fuel:	
M577	gasoline
M577A1	diesel
Fuel rating:	
M577	Octane 83 to 91
M577A1	Cetane 40 (uses grade DF-1, DF-2, DF A, and LITE (MIL F 46005).
Center of gravity above ground (loaded):	
M577	43.8 in.
M577A1	45.0 in.
Weight:	
Gross (combat loaded):	
M577	23,900 lb
M577A1	24,390 lb
Net:	
M577	22,800 lb
M577A1	23,060 lb
Air transported:	
M577	22,150 lb
M577A1	21,930 lb
Length of track on ground	105 in.
Ground contact area—0-inch penetration:	
M577	7.4 psi
M577A1	7.7 psi
Ground clearance	16⅛ in.
Ground pressure:	
Combat loaded weight:	
M577	7.59 psi
M577A1	7.70 psi
Net weight:	
M577	7.24 psi
M577A1	7.32 psi
Air transported weight:	
M577	7.05 psi
M577A1	6.96 psi
Pintle height (loaded)	26.5 in.
Electrical system	24 volts
Number of batteries	2

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*Characteristics and data to be included at a later date.

CHARACTERISTICS—Continued

Type of ground	negative
Communication system	radio and interphone
Capacities:	
Fuel (2 tanks)	120 gal
Cooling system:	
M577	(approx) 9½ gal
M577A1	(approx) 9 gal
Crankcase:	
M577	(approx) 12 qt
M577A1	(approx) 18 qt
Transmission	(approx) 12 qt
Brakes:	
Type:	
M577	differential band
M577A1	differential band and disc
Operation	mechanical
Transmission:	
Manufacturer	General Motors Corp. (Allison Div)
Model:	
M577	TX200-2B
M577A1	TX100-1
Type	single stage—multiphase
Number of ranges:	
Forward:	
M577	6
M577A1	4
Reverse	1
Final reduction	3.93:1
Hull construction	aluminum armor
Engine:	
Manufacturer:	
M577	Chrysler Corp.
M577A1	Detroit Diesel Engine Div.—GMC
Model:	
M577	75M
M577A1	5063-5290
Type:	
M577	overhead valve 90°V-8
M577A1	two-cycle diesel, V-6
Displacement:	
M577	361 cu in.
M577A1	318.6 cu in.
Bore:	
M577	4.125 in.
M577A1	3.875 in.
Stroke:	
M577	3.375 in.
M577A1	4.5 in.
Compression ratio:	
M577	7.8:1
M577A1	21:1
Governed speed (full load):	
M577	3,900 rpm
M577A1	2,800 rpm
Brake horsepower (min w/std accessories):	
M577	215 @ 4,000 rpm
M577A1	210 @ 2,800 rpm
Torque, gross (max w/std accessories):	
M577	302 lb-ft @ 2,800 rpm
M577A1	425 lb-ft @ 2,800 rpm
Type of ignition:	
M577	battery
M577A1	compression ignition

PERFORMANCE

Maximum grade ability	60%
Turning radius:	
M577	(min) 22 ft, 8 in.
M577A1	(min) 22 ft 8 in. w/pivot steer 12 ft, 8 in.
Fording depth	amphibious
Maximum vertical wall vehicle can climb	2 ft
Maximum trench vehicle can cross	5 ft, 6 in.
Fuel consumption (average conditions):	
M577	(approx) 2.5 mpg
M577A1	(approx) 3.4 mpg
Cruising range (average conditions):	
M577	200 miles
M577A1	300 miles
Allowable speed recommended:	
On land:	
M577	35 mph
M577A1	3.6 mph
In water	3 mph
Maximum allowable towed load, gross	14,500 lb

EQUIPMENT

Communications:	
Radio sets. Basic sets include:	
Amplitude modulated (AM) sets	AN/GRC-19, AN/VRC-24, AN/GRR-5, and AN/VRC-29.
Old series of frequency modulated (FM) sets	AN/GRC-3 through 8, AN/VRC-8 to 10, AN/VRC-13 to 15, AN/VRC-20 to 22, AN/VRQ 1 to 3, and intercommunication set AN/UIC-1.
New transistorized series of (FM) sets	AN/VRC-46, AN/VRC-47, AN/VRC-29, and intercommunication set AN/VIC-1(V).

Basic Issue Items: See TM 9-2300-224-10/3/2.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 carrier, uncrated.

Length	191.50 in.
Width	105.75 in.
Height	105.50 in.
Volume	1,238 cu ft
Area	141 sq ft
Gross weight:	
M577	22,150 lb
M577A1	21,766 lb
Ship tons	30.95

Outside Continental United States

Shipped

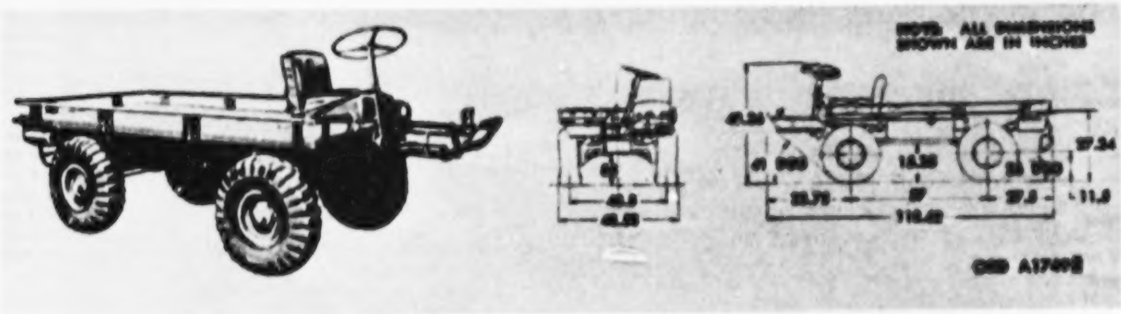
Length	190 in.
Width	100 in.
Height	101 in.
Volume	1,100 cu ft
Area	132 sq ft
Gross weight:	
M577	22,150 lb
M577A1	21,766 lb
Ship tons	27.50

References: TM 9-2300-224-ESC/3, TM 9-2300-224-ESC/8, TM 9-2300-224-10, TM 9-2300-224-10/3/2, TM 9-2300-224-20, TM 9-2300-224-20/3/2, TM 9-2300-224-20P, TM 9-2300-224-35, TM 9-2300-224-35P.

M577—LO 9-2300-224-12, TM 9-2300-224-20P/3, TM 9-2300-224-34/3, TM 9-2300-224-P/3, TM 9-6115-202-14, TM 9-6115-202-24P, TM 5-2805-208-14, TM 5-2805-208-24P.

M577A1—LO 9-2300-224-12/2, TM 9-2300-224-10/2/1, TM 9-2300-224-20/2/1, TM 9-2300-224-20P/3, TM 9-2300-224-34/3, TM 9-2300-224-35P/3.

TRUCK, PLATFORM, UTILITY: ½-TON, 4 X 4, M274, M274A1, M274A2, M274A3, AND M274A4, W/E



Major item

Shown: Truck, Platform, Utility: M274

Model	*Line item No.*	*Federal stock No.*
M274	4-03215-00	2320-049-4804
M274A1		2320-064-6373
M274A2	X55627	2320-074-1167
M274A3		2320-782-5792
M274A4		2320-782-5793

General

TRUCK, PLATFORM, UTILITY: ½-TON, 4 X 4, M274, M274A1, M274A2, M274A3, AND M274A4, W/E, is essentially a platform mounted on two axles and four wheels; with an air-cooled, opposed-type gasoline engine under the platform at the rear of the vehicle. Each lightweight vehicle is designed to carry light cargo over rough terrain at slow speed with a very low silhouette and keep pace with riflemen at foot speeds in combat.

Each truck has a four-wheel drive with three speeds forward and one reverse in the transmission and a two-speed transfer case. A quick-change mechanism allows either two- or four-wheel steer to be used. There is no suspension system, shock is being absorbed by low-pressure tires.

The vehicle does not have a cab, only a flat platform on which the driver's seat is mounted. A handrail is attached to the platform and can be raised to accommodate payload or lowered for shipping and storage. The engine and related power train units are located beneath the platform. The seat and footrest may also be detached and stowed beneath the platform when the vehicle is to be towed and for shipping and storage.

The steering gear assembly is so constructed that in case of necessity, the driver can dismount, disconnect the telescope brace holding the steering column in its upright position, and reposition the column forward in front of the vehicle, and retain control while walking or crouching in front of the vehicle.

Fording in water up to the bottom of the accessory drive pulley is safely possible, provided low speed and caution are used when entering water.

Differences among models:

The M274 and M274A1 are equipped with Military Standard AO53 and AO53-1 engines respectively. The M274A2, M274A3, and M274A4 vehicles are equipped with Military Standard AO42 engines. The M274 and M274A3 vehicles have a slightly higher transmission gear ratio. All models are considered to be functionally interchangeable.

Data plate location:

The data plate is located at the side of body over left front wheel.

Classification:

M274—Standard C (AMCTC item 126)
M274A1—Standard B (AMCTC item 126)
M274A2—Standard A (AMCTC item 1867)
M274A3
M274A4

CHARACTERISTICS

Crew	1
Weight:	
Net:	
Magnesium platform:	
M274, M274A1, and M274A2	900 lb
M274A3, and M274A4	
Gross:	
Magnesium platform:	
M274, M274A1, and M274A2	2,075 lb
M274A3, and M274A4	
Allowance for operator	175 lb
Payload:	
On highway	1,000 lb
Off highway	1,000 lb
Towing capacity	not a prime mover
Length (platform):	
M274	118.62 in.
M274A1, and M274A2	118.25 in.
M274A3, and M274A4	
Width:	
Over platform	46.6 in.
Over side rails	49 in.
Height loaded:	
Over platform	27.50 in.
Over driver's seat	42.24 in.
Over steering wheel	49.12 in.
Ground clearance:	
At front steering arm	12 in.
Under engine	11.5 in.
At rear axle	12.25 in.
Under propeller shaft	15.2 in.
Live axle gear ratio	1.87:1 drop gear; ratio 2.20:1
Axle:	
Weight capacities:	
Empty:	
Front	325 lb
Rear	575 lb
Loaded:	
Front	800 lb
Rear	1,100 lb

CHARACTERISTICS—Continued

Axle—Continued	
Tires:	
Size	7.50 x 10
Ply	4
Pressure:	
Cross-country	12 psi
Sand	12 psi
Mud and snow	10 psi
Fuel octane rating	83
Capacities:	
Fuel	8 gal
Crankcase, refill:	
M274, and M274A1	2 qt
M274A2, M274A3, and M274A4	2½ qt
Transmission and transfer	2 qt
Brakes:	
Service, type	internal expanding, mechanical
Parking, type	internal expanding, mechanical
Speeds	3 forward, 1 reverse with high and low range
At 4,200 rpm engine speed:	
High range:	
High	25 mph
Intermediate	14 mph
Low and reverse	8 mph
Low range:	
High	13 mph
Intermediate	7 mph
Low and reverse	4 mph
Overall gear ratios:	
Low and reverse	2.93:1
Intermediate	1.71:1
High	1.00:1
Engine (M274, and M274A1):	
Manufacturer	Military Standard (Willys)
Model No.:	
M274	A053
M274A1	A053-1
Type	horizontal, opposed, air-cooled
Displacement	53 cu in.
Bore and stroke	2.75 x 2.25
Compression ratio	6.5:1
Brake horsepower (max w/std accessories)	17 @ 3,200 rpm
Torque (max w/std accessories)	30 lb-ft @ 2,100 rpm
Governed speed (max)	4,200 rpm
Engine (M274A2, M274A3, and M274A4):	
Manufacturer	Military Standard (Continental Hercules)
Model	A042
Type	horizontal, opposed, air-cooled
Number of cylinders	2
Piston displacement	42.4 cu in.
Bore and stroke	3.00 x 3.00
Compression ratio	6.8:1
Brake horsepower (max w/std accessories)	13.6 @ 3,000 rpm
Torque (max w/std accessories)	26 lb-ft @ 2,300 rpm
Governed speed (max)	3,600 rpm

PERFORMANCE

Grade ability:	
Side slope	40 percent
Longitudinal slope	60 percent
Angle of approach	40°
Angle of departure	34°
Turning radius:	
Right	9 ft, 2 in.
Left	9 ft, 10 in.
Fording depth	18 in.
Fuel consumption	12.8 mpg
Cruising range, loaded	(5 mph) 151.3 mi (25 mph) 107.5 mi
Maximum speed	25 mph

EQUIPMENT

Basic Issue Items: See TM 9-2320-213-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

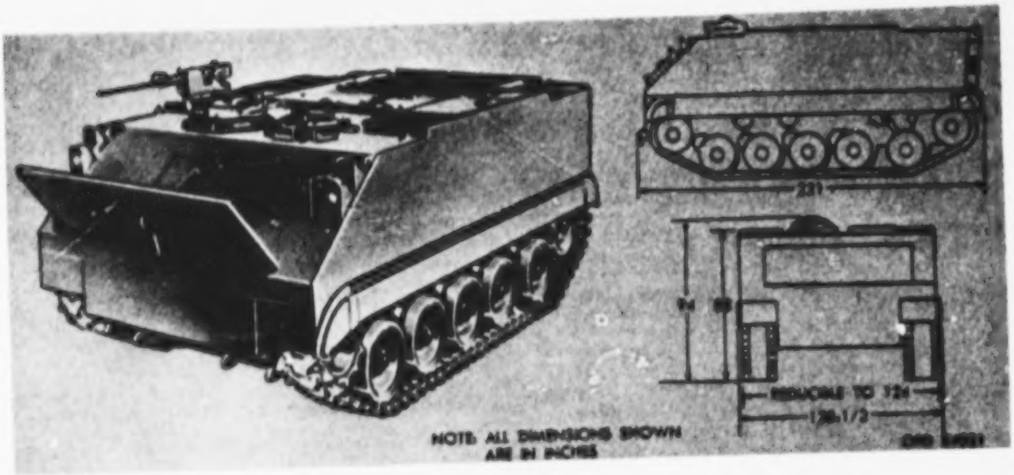
Shipped	
Length	117 in.
Width	46 in.
Height	27½ in.
Volume (uncrated)	85.7 cu ft
Area	37.3 sq ft
Gross weight	796 lb
Ship tons	2.14

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2320-213-10, LO 9-2320-213-12, TM 9-8034-20, TM 9-2320-213-20P, 35 and 35P, TM 9-2520-224-35 and 35P, TM 9-7101-35, TM 9-2805-211-35P, TM 9-2910-202-35 and 35P, TM 9-7503-35, TM 9-2910-203-35P, TM 9-2920-205-35 and 35P, TM 9-2530-200-35P.

CARRIER, PERSONNEL, FULL TRACKED: ARMORED, M59, W/E



	Major item	
Model	***Line item No.***	***Federal stock No.***
M59	4-05225-20	2320-834-0039

General

CARRIER, PERSONNEL, FULL TRACKED: armored, M59, w/e, is a multiple-use vehicle of unlimited fording depth. The vehicle can be used as a personnel, cargo, litter, or weapons carrier, as a command post, or as a reconnaissance vehicle for amphibious or on land operation.

The vehicle can be identified by its high silhouette, the trim vane mounted on the upper slope at the front and the commander's cupola being located directly to the right of the driver's hatch.

The vehicle, fully loaded, can traverse inland waterways under its own power without any special preparation or equipment. Standard T91E3 track provides propulsion and steering in water as well as on land. The vehicle's even distribution of weight results in uniform loading of suspension on land and level trim in water. Roof location of air intake and slight pressurization of personnel compartment minimize entrance of dust stirred up by tracks.

Differences among models

Data plate location

The name and data plate is located on the left side of the driver's compartment, just to the left of the driver's seat.

Classification: Standard B (OTCM 37119).

Characteristics

Crew	2
Passengers	10
Armament:	
Cal. .50 machinegun heavy barrel, M2 cupola type	1
Cal. .45 submachinegun, M3A1	1
Communication system	radio and interphone
Weight, fighting (estimated)	42,600 lb
Less crew, stowage, and fuel	39,504 lb
Ground pressure	7.1 psi
Ground clearance	18 in.
Pintle height (loaded)	28½ in.
Electrical system:	
Potential	24 volts
Number of batteries	2
Type of batteries	6TN

Fuel octane rating	80
Capacities:	
Fuel (total)	136½ gal
Cooling system (each engine)	28 qt
Crankcase (each engine)	11 qt
Transmission	14 qt
Controlled differential (including oil cooler)	24 qt
Final drive:	
Vehicles No. F7 through F1171	6½ qt
Vehicles No. F1171 and up	3½ qt
Engine (two):	
Manufacturer	General Motors Corp. Model 302
Type	water-cooled, 6-cylinder, in-line
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Maximum governed speed (full load)	3,400 rpm
Brake horsepower, gross (max w/std accessories)	127 @ 3,350 rpm
Torque, gross (max w/std accessories)	254 lb-ft @ 1,800 rpm
Type of ignition	battery-distributor
Transmission (two):	
Manufacturer	General Motors Corp. Model 300 MG or 301 MG
Type	hydramatic
Brakes	hand lever controlled, mechanical, controlled differential
No. of ranges	2
Final drive gear ratio	4.25:1

AMMUNITION

Cal. .45	180 rounds
Cal. .50	2,000 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	28 ft
Fording depth	floats
Maximum vertical obstacle vehicle can climb	18 in.
Maximum width of ditch vehicle can cross	66 in.
Fuel consumption (average conditions on land)	1 mpg
Allowable speed, recommended; on land	32 mph
On land	32 mph
In water	4.3 mph
Maximum allowable towed load, gross	14,000 lb
Cruising range (average conditions)	120 mi

EQUIPMENT

Basic Issue Items: See TM 9-2300-203-12.

RADIO SETS AND COMBINATIONS:

AN/GRC-3 through 8 or AN/VRC-13 through 15 or AN/VRC-7 or AN/VRQ-1 through 3 and AN/U1C-1 and AN/GRC-19.

INTERPHONE CONTROL: C-980-U

Sighting and fire control[a]

- Mount, Periscope: M104A1
- PERISCOPE: M17 and M19
- SIGHT PERISCOPE: M28 (sight cal. .50)

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	221 in.
Width	128⅛ in.
Height	94 in.
Volume	1,545 cu ft
Area	197 sq ft
Gross weight	40,000 lb
Ship tons	38.62

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-203-12, TM 9-2300-203-20P, SM 9-4-5180-J16-49, LO 9-7002, SNL G-280.

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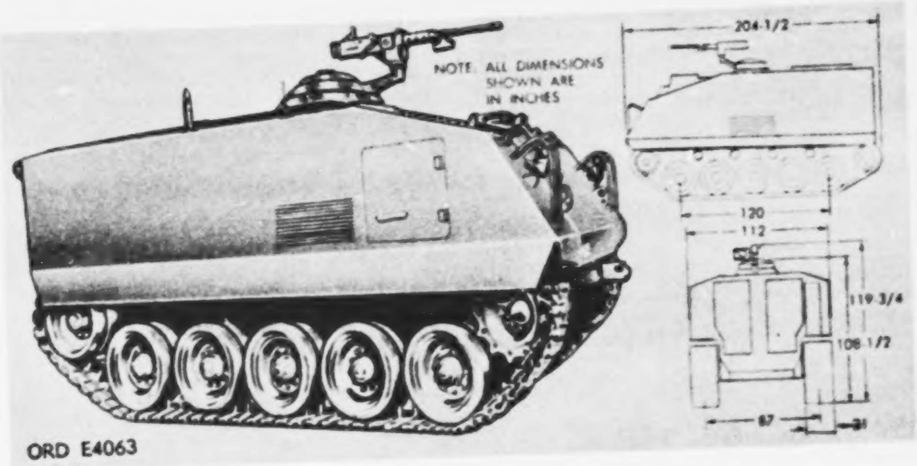
[a] For characteristics and data, see item in sections 14 and 27.

CARRIER, PERSONNEL, FULL TRACKED: ARMORED, M75, W/E



ORD E4063

Major item

Model	*Line item No.*	*Federal stock No.*
M75	4-05225-30	2320-700-6300

General

CARRIER, PERSONNEL, FULL TRACKED: armored, M75, w/e, transports and furnishes protection for 10 men with full equipment, a driver, and a commander. The carrier M75 consists of a hull, power plant, suspension, electrical system, and auxiliary equipment. The hull is a completely inclosed, welded armor plate, and cast structure. The power plant, composed of the engine and transmission, is mounted on a frame as an integral unit and can be removed from the hull for mechanical repair, adjustment, or replacement. The vehicle is equipped with torsion bar-type suspension and individually spring road wheels which travel on two wide steel tracks which are individually driven by track drive sprockets. This vehicle is nonamphibious in operation and has no trim-vane on the front of the hull.

Differences among models

Data plate location

The identification plate is located on the right wall of the driver's compartment.

Classification: Standard C (OTCM 37728)

CHARACTERISTICS

Crew	2
Weight:	
Fighting (estimated)	41,500 lb
Less crew, stowage, and fuel	36,669 lb
Ground pressure	8.2 psi
Ground clearance	18 in
Pintle height (loaded)	29⅞ in
Electrical system:	
Potential	24 volts
Number of batteries	2
Type of batteries	6TN
Fuel octane rating	80
Capacities:	
Fuel (total)	150 gal
Crankcase, refill (without cooler, cones, and lines)	48 qt
Transmission, cross-drive (including cooler)	64 qt
Final drive (each)	2 qt
Engine:	
Manufacturer	Continental, Model AO-895-4
Type	6-cylinder, 4-cycle, valve-in-head, air cooled
Displacement	896 cu in.
Bore	5¾ in.
Stroke	5¾ in.
Compression ratio	6.5:1
Max governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	295 @ 2,660 rpm
Torque, gross (max w/std accessories)	672 lb-ft @ 1,850 rpm
Type of ignition	magneto
Transmission:	
Manufacturer	General Motors Corp (Allison Div.), Model CD-500-4
Type	Cross drive
Brakes	hand lever controlled, hydraulic, multiple disk sleeve
No. of ranges	3
Final drive gear ratio	4:1

Armament: One cal. .50, machine gun, M2; One cal. .45 submachine gun, M3A1.

Communications system	radio and interphone

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
W/o deep-water fording kit	48 in.
W/deep-water fording kit	80 in.
Maximum vertical obstacle vehicle can climb	18 in
Maximum width of ditch vehicle can cross	66 in.
Fuel consumption (average conditions)	0.8 mpg
Allowable speed, recommended	44.5 mph
Maximum allowable towed load, gross	14,000 lb
Cruising range (average conditions)	115 mi

AMMUNITION

Cal. .50	1800 rounds
Cal. .45	180 rounds
3.5 Inch	10 rockets

EQUIPMENT

Sighting and fire control:*

PERISCOPE: M17 and M19.

Basic Issue Items: See ORD 7 SNL G-260.

Radio sets: AN/GRC-3 through 8 or AN/VRC-13 through 15 or AN/VRC-7, or AN/VRQ-1 through 3 and AN/UIC-1.

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see item in section 27.

STORAGE AND SHIPMENT DATA

Within Continental United States

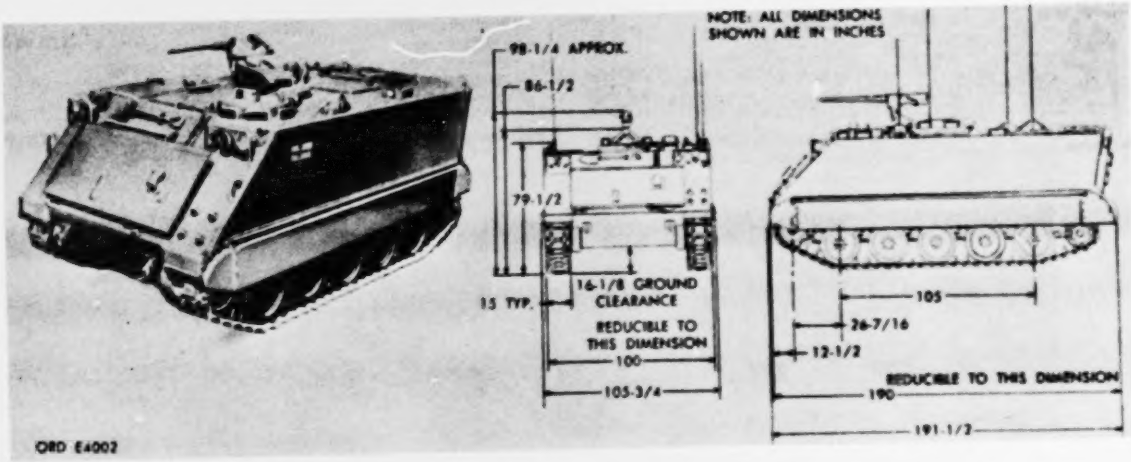
Shipped	
Length	204⅛ in.
Width	112 in.
Height	119⅜ in.
Volume	1,438 cu ft
Gross weight	42,000 lb
Ship tons	35.95

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL G-260, TM 9-7418.

CARRIER, PERSONNEL, FULL TRACKED: ARMORED, M113 (T113E2), W/E


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
98-1/4 APPROX.
86-1/2
79-1/2
16-1/8 GROUND CLEARANCE
15 TYP.
REDUCIBLE TO THIS DIMENSION
100
105-3/4
105
26-7/16
12-1/2
REDUCIBLE TO THIS DIMENSION
190
191-1/2

ORD E4002

Major item

Model	***Line item No.***	***Federal stock No.***
M113 (T113E2)	4-05225-01	2320-629-1294

General

CARRIER, PERSONNEL, FULL TRACKED: armored, M113 (T113E2), w/e, is a lightweight, low-silhouette vehicle designed to transport personnel and cargo. The vehicle is capable of amphibious operation on inland lakes and streams, of extended cross-country travel over rough terrain, and of high speed operation on improved roads and highways. Movement of the tracks propels and steers the vehicle on both land and water. The low net weight of the carrier M113 enables it to be transported by cargo aircraft and parachute-dropped to using forces. The vehicle accommodates a driver, troop commander, and 11 passengers. An open-type cupola with a pintle mount for a .50 caliber flexible machine gun capable of 360° rotation is located at the commander's station.

Differences among models

Data plate location

The identification plate is located above the engine compartment door which is to the right of the driver.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Crew (Driver)	1
Weight:	
Combat loaded	22,615 lb
Air drop	18,200 lb
Less crew, stowage, and fuel	19,755 lb
Ground pressure	7.3 psi
Ground clearance	16⅛ in.
Pintle height (loaded)	30 in.
Capacities:	
Fuel (total)	80 gal
Crankcase, refill (w/o cooler, cores, and lines)	10 qt
Transmission, cross-drive, nominal refill	16 qt
Final drive (each side)	3 pt
Electrical system	24 volts
Number of batteries	2
Type of batteries	(12 volt) 6TN
Generator	100 amps
Fuel octane rating	80
Engine:	
Manufacturer	Chrysler
Model	75M
Types	OHV—90°—V8
Number of cylinders	8
Displacement	361 cu in.
Bore	4.125 in.
Stroke	3.375 in.
Compression ratio	7.8:1
Maximum governed speed (full load)	3,900 rpm
Brake horsepower, gross (max w/std accessories)	215 @ 4,000 rpm
Torque, gross (max w/std accessories)	332 lb-ft @ 2,800 rpm
Type of ignition	battery
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	TX200-X
Type	single stage—multiphase
Brakes	differential band and disk
Ratio from torque converter output shaft to final drive flange:	
High range	5.03:1
Low range	26.64:1
Reverse range	30.34:1
Armament: Gun, machine, cal .50, M2, flexible	
Communications system	radio and interphone

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	12 ft, 7 in.
Maximum vertical obstacle vehicle can climb	24 in.
Maximum width of ditch vehicle can cross	66 in.
Allowable speed, recommended	40 mph
Maximum allowable towed load, gross	24,000 lb
Cruising range (average conditions)	200 mi
Fording depth	floats

AMMUNITION

Cal .50	2,000 rd

EQUIPMENT

Sighting and fire-control:*	
PERISCOPE: M17	qty 9, w/1 spare
PERISCOPE: M19	qty 1, w/1 spare
Radio set	AN/GRR-5, AN/PRC-8 thru 10, AN/VRQ-1 thru 3, AN/GRC-19, AN/VRC-12
Interphone	AN/VIC-1
Interphone, external, extension kit	AN/GRC-3 thru 8, AN/VRC-24
Location	on wall racks and sponson
Basic Issue Items: See TM 9-2300-224-10.	

* For characteristics and data, see item in section 27.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

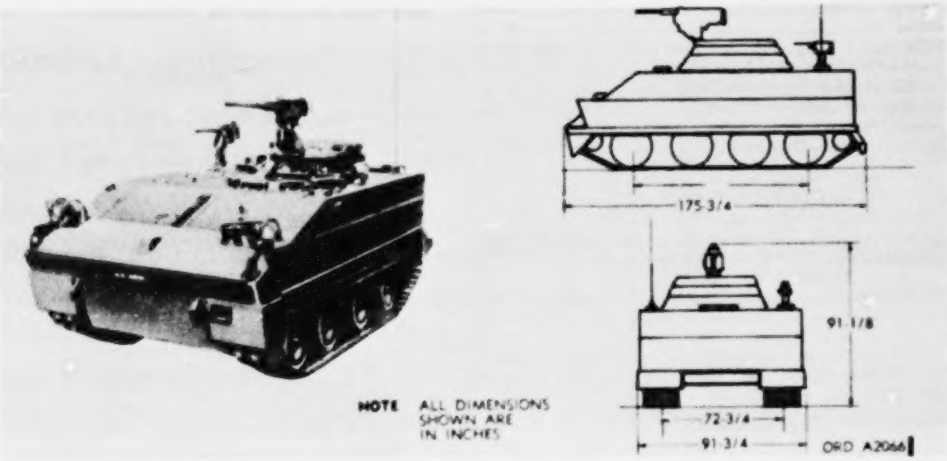
Shipped uncrated	
Length	191⅛ in.
Width	105¾ in.
Height	79⅛ in.
Volume	936 cu ft
Area	141 sq ft
Gross weight	22,615 lb
Ship tons	23.40

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	1,024.6 cu ft
Area	
Gross weight	
Ship tons	

References: TM 9-2300-224-10, TM 9-2300-224-20 and 20P; TM 9-2300-224-35 and 35P; LO 9-2300-224-10.

CARRIER, COMMAND AND RECONNAISSANCE: ARMORED. M114



Model	*Line item No.*	*Federal stock No.*
M114	4-05196-10	2320-860-2349

General

CARRIER, COMMAND AND RECONNAISSANCE: armored. M114 is a light-weight, low silhouette vehicle designed for command and reconnaissance missions. The vehicle is capable of operation with full-rated load over unimproved roads, trails, hilly country, loose sand, snow, ice, soft marsh, rock strewn areas, and inland waterways under all seasonal conditions in arctic, temperate, and tropical zones. Movement of the tracks propels and steers the vehicle on both land and water. The low net weight of the vehicle enables it to be transported by cargo aircrafts and parachute-dropped to using forces. A commander's cupola, with split hatch covers, incorporates a pintle mount for MACHINE GUN, CALIBER .50: M2 * and is capable of 360-degree rotation. Two machine gun pintle mounts, capable of mounting MACHINE GUN, CALIBER .30: M1919A4,* or M37,* are located at the observer's station, one in front and one in rear of the hatch opening.

Differences among models

Data plate location

Classification: Standard A (AMCTCM 966).

CHARACTERISTICS

Crew	3
Weight:	
Fighting	14,749 lb
Less crew, storage, and fuel	12,900 lb
Length, overall	175¾ in.
Width, overall	91¾ in.
Height, overall	91⅛ in.
Ground pressure	4.63 psi
Ground clearance	14¼ in.
Tread, center to center of track	72¾ in.
Pintle height	
Angle of approach	
Angle of departure	
Electrical system	24 volt
Number of batteries	2 (normal) and 4 (winterization kit)
Type of batteries	24 volt
Generator (alternator)	100 amp

* For characteristics and data, see item in section 2.

Fuel octane rating (min)	91
Capacities:	
Fuel	110 gal
Cooling system	35 qt
Crankcase:	
Dry	7 qt
Refill	6 qt
w/filter change	7 qt
Transmission:	
Dry	13 qt
Refill	8 qt
Gear steer unit:	
Dry	15 qt
Refill	11 qt
Engine:	
Manufacturer	Chevrolet
Model	Military version of 283 cu in., V-8
Type	overhead valve, liquid cooled, gasoline
Displacement	283 cu in.
Bore	3⅞ in.
Stroke	3 in.
Compression ratio	8:1
Maximum governed speed (full load)	4,600 rpm
Brake horsepower, gross (Max w/std accessories)	160 @ 4,200 rpm 160 @ 4,600 rpm
Torque, gross (max w/std accessories)	210 lb-ft @ 2,400 rpm
Type of ignition	igniter
Transmission:	
Manufacturer	Detroit Transmission Div.
Model	305MC
Type	hydramatic
Brakes	multiple wet plate
Number of ranges	3 forward and reverse
Final drive gear ratio	4.17:1

Armament:

MACHINE GUN, CALIBER .30, M1919A4 or M37,

or

MACHINE GUN, 7.62 MILLIMETER: M73 1

MACHINE GUN, CALIBER .50: M85C or M2, flexible.

Communication system .... radio and interphone

PERFORMANCE

Maximum grade ability	60%
Turning radius	32 ft
Fording depth	amphibious
Maximum vertical obstacle vehicle can climb	18 ft
Maximum width of ditch vehicle can cross	60 in.
Fuel consumption (average conditions)	2.72 mpg
Allowable speed, recommended—34 mph	
Cruising range (average conditions)	approx 300 mi

AMMUNITION

Cal .50	1,000 rounds
Cal .30	
7.62-mm:	
For machine gun	3,000 rounds
For rifle	150 rounds
Grenades:	
Hand	8
For LAUNCHER, GRENADE: M79	48

EQUIPMENT

Sighting and Fire Control:**
- BINOCULAR: M17A1
- PERISCOPE, TANK: M13
- PERISCOPE, TANK: M19
- PERISCOPE, TANK: M26

Communications: Radio Sets and Combinations
- AN/VRC-13 plus intercom AN/UIC-1 (Armored units);
- AN/VRC-9 plus intercom AN/UIC-1 (Artillery units);
- AN/VRC-15 or AN/VRC-18 plus intercom AN/UIC-1 (infantry or field units)

Basic Issue Items: See TM 9-2320-224-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped:

Length	
Width	
Height	
Volume	752 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

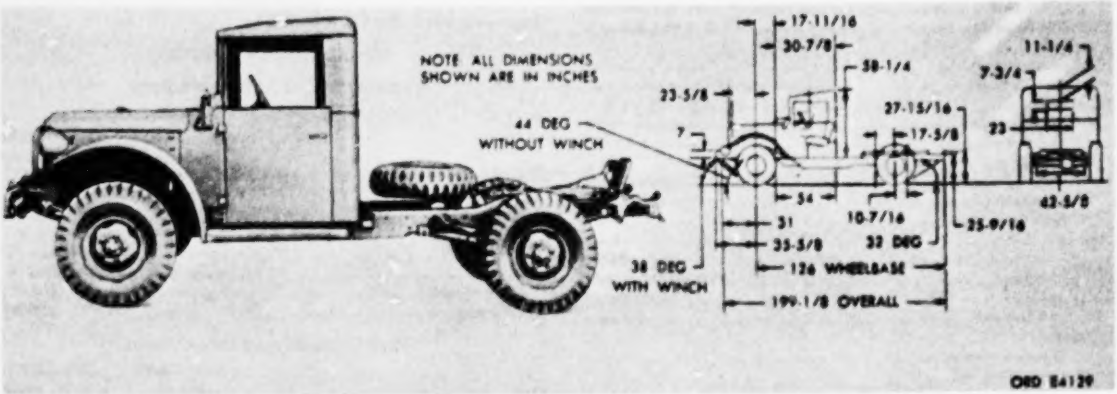
Shipped:

Length	
Width	
Height	
Volume	752 cu ft
Area	
Gross weight	
Ship tons	

References: TM 9-2320-224-10, TM 9-2320-224-20, TM 2320-224-20P, TM 9-2320-224-35, TM 9-2320-224-35P.

** For characteristics and data, see item in sections 14 and 27.

CHASSIS, TRUCK: ¾-TON, 4 X 4, M56 AND M56B1, W/AND WO/ WINCH AND M56C, W/WINCH



Major item

Model	*Line item No.*	*Federal stock No.*
M56, w/o wn		2320-294-4942
M56, w/wn		2320-835-8618
M56C, w/wn		2320-219-7329
M56B1, w/o wn		2320-440-8809
M56B1, w/wn		2320-542-4633

General

CHASSIS, TRUCK: ¾-ton, 4 x 4, M56 and M56B1, w/ and w/o wn and M56C w/wn, is provided for mounting ambulance or telephone maintenance bodies. They are equipped with a liquid cooled, 6-cylinder, L head-type gasoline engine located at the front of the vehicle. Power is transmitted through the clutch and the four-speed transmission. A short propeller shaft connects the transmission to the two-range transfer unit. Power is then transmitted to both front and rear axles by propeller shafts.

Front and rear springs are of the semielliptic-type. Hydraulic-type shock absorbers are used to control flexing of both front and rear springs. The steering gear is the worm and sector type. A 24-volt electrical system supplies current for starting, ignition, lights, and horn. The electrical system is completely waterproofed. The lighting system includes service headlights, blackout driving light, marker lights, service and blackout tail and stop lights, and instrument panel lights.

Differences among models

M56C is the same as chassis M56, except M56C is equipped with heavy-duty suspension on rear axle to provide improved stability. M56C is used for truck, bomb handling, ¾-ton, 4 x 4, XM42 and truck, maintenance, ¾-ton, 4 x 4, XM201.

Data plate location

Identification plates are located on the instrument panel in the driver compartment, in the engine compartment, and in the patient compartment of the ambulance truck M43.

Classification

M56 w/o winch—Standard B (OTCM 37926)
M56 w/winch—Standard B (OTCM 37926)
M56C w/winch—Standard A (OTCM 36876)
M56B1 w/o winch—Standard A (37926)
M56B1 w/winch—Standard A (OTCM 37926)

CHARACTERISTICS

Crew	2	
Weight:		
Net:		
W/o winch	5,200 lb	
W/winch	5,450 lb	
Live-axle gear ratio	5.83:1	
Axle load:		
Empty:		
W/o winch:		
Front axle	3,125 lb	
Rear axle	2,075 lb	
W/winch:		
Front axle	3,400 lb	
Rear axle	2,050 lb	
Gross load:		
On highway:		
W/o winch	3,200 lb	
W/winch	2,950 lb	
Off highway:		
W/o winch	2,700 lb	
W/winch	2,450 lb	
Tires:		
Size	9.00 x 16	
Ply	8	
Pressure:		
Highway	40 ps	
Highway (no load)	30 psi	
Tread, center to center (front and rear)	62 in.	
Ground clearance	10⅝ in.	
Electrical system:		
Nominal voltage	24 volt	
Number of batteries (12 volt)	2	
Fuel octane rating	72-80	
Capacities:		
Fuel	24 gal	
Cooling system	17 qt	
Crankcase, refill	5 qt	
Transmission:		
Through engine T245-3955	10½ pt (w/pto)	9 pt (w/o pto)
After engine T245-3955	7 pt (w/pto)	6 pt (w/o pto)
Transfer	5 pt	
Axles:		
Front	6 pt	
Rear	6 pt	
Winch gear lubricant capacity (each end)	1 qt	
Winch load capacity	7,500 lb	
Engine:		
Manufacturer	Dodge	
Model	T-245	
Type	gasoline, L-head, 6-cylinder, in-line	
Displacement	230 2 cu in.	
Bore	3 25 in.	
Stroke	4 625 in.	
Compression ratio:	6.7:1	
Governed speed	3,400 rpm	

CHARACTERISTICS—Continued

Engine—Continued	
Brake horsepower:	
Net	78 @ 3,400 rpm
Gross	94 @ 3,400 rpm
Torque, gross	188 lb-ft @ 1,200 rpm
Brakes:	
Manufacturer	Dodge
Service brake, type	internal expanding front and rear
Drum size	14⅛ dia x 1⅝ w
Parking brake	external contracting
Drum size	$7\frac{15}{16}$ in. dia. x 2 in. w
Transmission:	
Type	synchromesh
Number of speeds	4 forward; 1 reverse
Gear ratio	
1st	6.4:1
2d	3.09:1
3d	1.69:1
4th	direct
Reverse	7.61:1
Transfer:	
Number of speeds	2
Gear ratio:	
Low	1.96:1
High	1:1

PERFORMANCE

Maximum grade ability (lowest gear off highway load)	68 percent
Turning radius	27 ft
Fording depth:	
W/o fording kit	42 in.
W/fording kit	84 in.
Fuel consumption (loaded)	9 mpg
Cruising range (loaded)	225 mi
Allowable speed (governed)	55 mpg

Maximum allowable towed load:	
Cross-country	4,000 lb
Highway	6,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8030, C5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

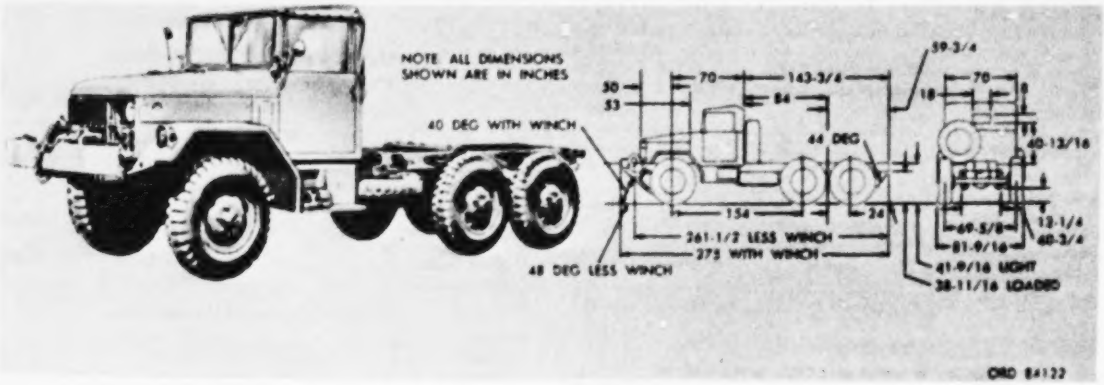
	M56, M56B1 /o wn	*M56, M56B1, M56C w/wn*
Shipped		
Length	199⅛ in.	203⅝ in.
Width	73⅛ in.	73⅛ in.
Height	63⅛ in.	63⅛ in.
Volume	524 cu ft	528 cu ft
Area	103 sq ft	105 sq ft
Gross weight	5,350 lb	5,350 lb
Ship tons	13.10	13.20

Outside Continental United States

	M56, M56B1 w/o wn	*M56, M56B1, M56C w/wn*
Shipped		
Length	199⅛ in.	203⅝ in.
Width	73⅛ in.	73⅛ in.
Height	63⅛ in.	63⅛ in.
Volume	524 cu ft	528 cu ft
Area	103 sq ft	105 sq ft
Gross weight	5,350 lb	5,350 lb
Ship tons	13.10	13.20

References: TM 9-8030, TM 9-2320-212-20P, SNL G-741, TM 9-1826A, TM 9-1828A, TM 9-2020-210-34, TM 9-1825B, TM 9-2520-232-35, SB 9-1, SB 9-184/1.

CHASSIS, TRUCK: 2½-TON, 6 X 6, M44 AND M44C, W/ AND W/O WINCH



ORD 84122

Major item

Model	*Line item No.*	*Federal stock No.*
M44, w/wn		2320–835–8199
M44, w/o wn		2320–736–8578
M44C, w/o wn		2320–690–8361
M44C, w/wn		2320–706–2228

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M44 and M44C, w/ and w/o wn, mount optional type bodies. The M44 is the basic chassis for the TRUCK, CARGO: M34 and for the Signal Corps Maintenance Trucks V–17A/MTQ and V–18A/MTQ. They are equipped with one driving front axle and two driving rear axles. Provision is made for normal driving to be done by rear axles only. All axles are bevel drive top mounted, double reduction, single speed.

Power is supplied by a gasoline type, 6-cylinder, 4-cycle, water-cooled engine with overhead valves and removable wet-sleeve cylinders. Air compressor, carburetor, clutch, distributor, fuel pump, generator, oil filter, and starter are mounted on engine. The transmission, mounted on rear of engine, has five speeds forward and one reverse. The transfer is mounted back of the transmission. The clutch is single dry-plate type attached to flywheel.

The cab is a metal, open top structure approximately 33 inches high, which surrounds the driver's compartment. A two-piece windshield is mounted at rear of cowl. An instrument panel, below windshield, serves as support for steering jacket assembly, and as mounting for instruments and switches. The cab is furnished with adjustable driver's seat and a companion seat. Doors are provided at each side. Foot operated ventilators are installed in lower portion of front panels. Tools are stored under driver's seat. The cab may be covered by a canvas tarpaulin or metal hard top closure.

The front winch assembly on vehicles so equipped is a worm-gear, jaw-clutch, single-drum assembly with an adjustable drag brake on the drum to prevent drum spin during free spooling of the drum line. The winch has an adjustable automatic worm brake for controlled lowering of a load.

Differences among models

Data plate location

Identification plates (nameplates) are located on the instrument panel in the cab of the truck chassis.

Classification: Standard A (OTCM 37119)

CHARACTERISTICS

Crew	2
Weight	
Net:	
W/o winch	10,255 lb
W/winch	10,665 lb
Gross allowance:	
W/o winch:	
Off highway	17,850 lb
On highway	22,850 lb
W/winch:	
Off highway	17,850 lb
On highway	22,850 lb
Axle gear ratio	6.722:1
Axle load:	
Empty:	
W/o winch:	
Front	5,350 lb
Rear	4,905 lb
W/winch:	
Front	5,845 lb
Rear	4,820 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	50 psi
Cross country	
Sand	
Tread, center-to-center, front	69⅝ in.
Ground clearance	12¼ in.
Pintle height, empty	35¼ in.
Frame height (at rear)	41⁹⁄₁₆ in.
Fuel octane rating	80
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission, w/power-take-off	4.25 qt
Transfer	7 qt
Axles, each	7 qt
Winch: load capacity	10,000 lb
Electrical system:	
Voltage	24 volts
Number of batteries	2
Brakes:	
Service:	
Manufacturer	Timken
Type	air-hydraulic
Parking, type	dual grip
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA–331
Continental	Model COA–331
Displacement	331 cu in.

CHARACTERISTICS—Continued

Engine—Continued	
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower (max w/std accessories)	127 @ 3,400 rpm
Torque (max w/std accessories)	248 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.96:1

PERFORMANCE

Computed grade ability in lowest gear (with towed load, off highway)	64 percent
Turning radius:	
W/o winch	35 ft
W/winch	36 ft
Fording depth:	
W/o kit	40 in.
W/kit	72 in.
Fuel consumption, w/body and payload	7 mpg
Cruising range, w/body and payload	350 mi
Maximum speed governed, w/body and payload	62 mph
Maximum pintle tow, gross:	
Off highway	6,000 lb
On highway	10,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022, C5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

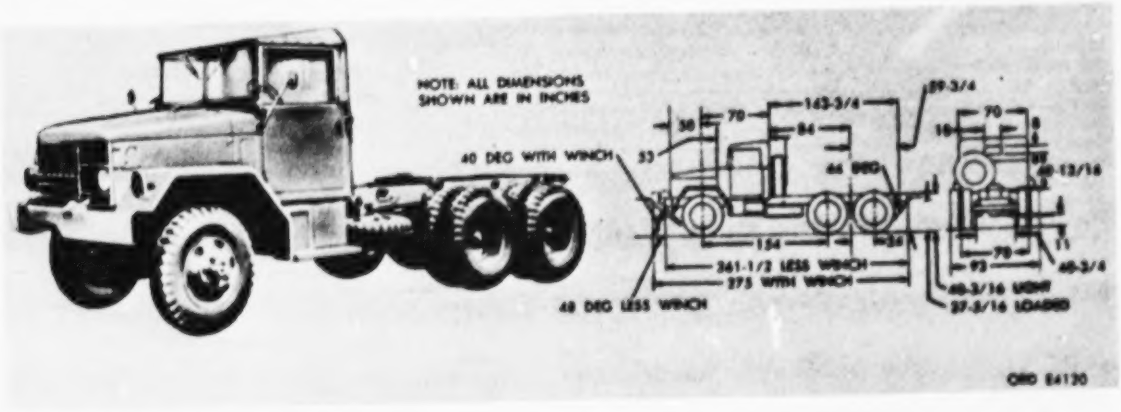
	M44C *w/wn*	*M44C* *w/o wn*	*M44* *w/o wn*	*M44* *w/wn*
Shipped				
Length			262 in.	263 in.
Width			88 in.	88 in.
Height			82 in.	82 in.
Volume			1,053 cu ft	1,108 cu ft
Area				
Gross weight			10,250 lb	10,605 lb
Ship tons			26.32	27.7

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-8023-1, TM 9-8023-2, SNL G-742, TM 9-2320-209-20P, TM 9-1828A, TM 9-8047, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, LO 9-8022.

CHASSIS, TRUCK: 2½-TON, 6 X 6, M45, W/ AND WO/WINCH AND M45C, W/WINCH



ORD E4130

Major item

Model	*Line item No.*	*Federal stock No.*
M45, w/wn		2320-736-8524
M45, w/o wn		2320-835-8196
M45C, w/wn		2320-219-7330

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M45, w/ and w/o wn and M45C, w/wn mount optional type bodies or are used as a tractor truck. They are equipped with one driving front axle and two driving rear axles. Provision is made for normal driving to be done by rear axles only. All axles are bevel drive top mounted, double reduction, single speed. Power is supplied by a gasoline type, 6-cylinder, 4-cycle, water-cooled engine with overhead valves and removable wet-sleeve cylinders. Air compressor, carburetor, clutch, distributor, fuel pump, generator, oil filter and starter are mounted on engine. The transmission, mounted on rear of engine, has five speeds forward and one reverse. The transfer is mounted back of the transmission. The clutch is single dry-plate type attached to flywheel. The cab is a metal, open top structure approximately 33 inches high, which surrounds the driver's compartment. A two-piece windshield is mounted at rear of cowl. An instrument panel, below windshield, serves as support for steering jacket assembly, and as mounting for instruments and switches. The cab is furnished with adjustable driver's seat and a companion seat. Doors are provided at each side.

Foot operated ventilators are installed in lower portion of front panels. Tools are stored under driver's seat. The cab may be covered by a canvas tarpaulin or metal hard top closure.

The front winch assembly on vehicles so equipped is a wormgear, jaw-clutch, single-drum assembly with an adjustable drag brake on the drum to prevent drum spin during free spooling of the drum line. The winch has an adjustable automatic worm brake, for controlled lowering of a load.

The M45 is the basic chassis for the following 2½-ton vehicles: Truck, cargo, M35; Truck, tank gasoline, M49 and M49C; Truck, tank, water, M50; Truck tractor, M48; Truck, Van: medical, M132; Truck, Van shop, M109.

Differences among models

Chassis M45C is the same as M45, except M45C is equipped with walking beam suspension on the rear axle. M45C is used for Truck, Crane, 2½-ton, 6 x 6, M108 and Truck, Light Wrecker, 2½-ton, 6 x 6, M60.

Data plate location

Identification plates (nameplates) are located on the instrument panel in the cab of the truck chassis.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net w/o winch	10,520 lb
Net w/winch	10,935 lb
Gross allowance:	
W/o winch:	
Off highway	6,980 lb
On highway	11,980 lb
W/winch:	
Off highway	6,565 lb
On highway	11,565 lb
Axle gear ratio	6.722:1
Axle load:	
Empty:	
W/o winch:	
Front	5,190 lb
Rear	5,330 lb
W/winch:	
Front	5,690 lb
Rear	5,245 lb
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	
Cross country	
Sand	
Tread, center to center, front	$67\frac{3}{8}$ in.
Ground clearance (lowest point)	11 in.
Pintle height, empty	34 in.
Frame height (at rear)	$40\frac{3}{16}$ in.
Fuel octane rating	80
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission, w/power-take off	4.25 qt
Transfer	7 qt
Axles (each)	7 qt
Winch (load capacity)	10,000 lb
Electrical system:	
Voltage	24 volt
Number of batteries	2
Brakes:	
Service:	
Manufacturer	Timken
Type	internal, air/hydraulic
Parking, type	dual grip
Percent slope effective	60

CHARACTERISTICS—Continued

Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	gasoline, valve-in-head
Number of cylinders	6
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.75:1
Governed speed:	
Load	3,400 rpm
No load	3,600 rpm
Brake horsepower (max w/std accessories)	127 @ 3,400 rpm
Torque (max w/std accessories)	248 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear, ratio	high 1:1; low 7.55:1
Transfer:	
Speeds	2
Gear ratio	high 1:1; low 1.98:1

PERFORMANCE

Computed grade ability in lowest gear (with load, off highway)	65 percent
Turning radius:	
W/o winch	36 ft
W/winch	37¼ ft
Fording depth (less kit)	40 in.
Fuel consumption, loaded	6 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	58 mph

Maximum pintle tow, gross:	
Off highway	6,000 lb
On highway	10,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

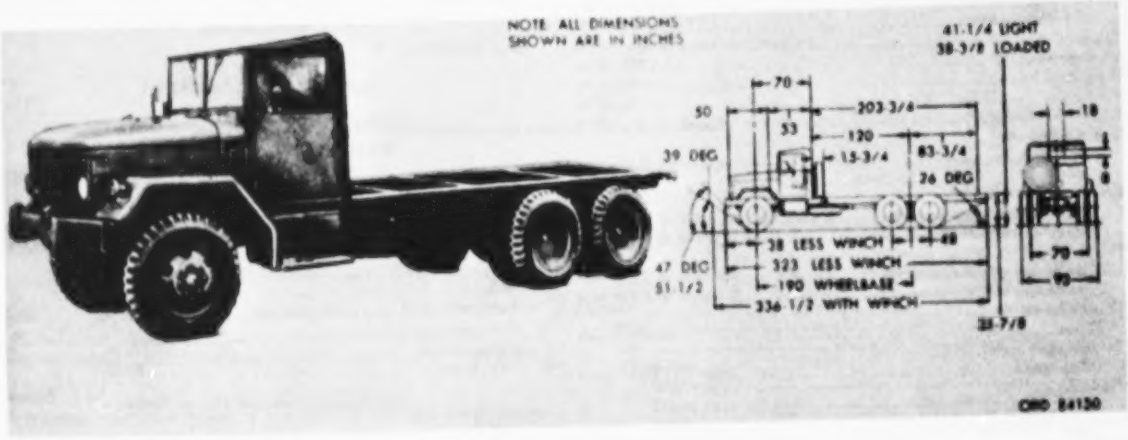
Shipped	*M45* w/wn	*M45* w/o wn	*M45C* w/wn
Length	252 in.	275 in.	321 in.
Width	93 in.	93 in.	93 in.
Height	81 in.	81 in.	120 in.
Volume	1,136 cu ft	1,196 cu ft	1,970 cu ft
Area			
Gross weight	10,524 lb	10,935 lb	11,565 lb
Ship tons	28.4	29.9	49.25

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-8023-1, TM 9-8023-2, SNL G-742' TM 9-2320-209-20P, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, LO 9-8022.

CHASSIS, TRUCK: 2½-TON, 6 X 6, M46 AND M46C



Major item

Model	*Line item No.*	*Federal stock No.*
M46, w/winch		2320-835-8198
M46C, w/o winch		2320-542-4414

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M46 and M46C, is provided to mount optional type bodies. The chassis M46 is the basic chassis for the 2½-ton truck, cargo, M36.

The truck chassis are equipped with one driving front axle and two driving rear axles. Provision is made for normal driving to be done by rear axles only. All axles are bevel drive tap mounted, double reduction, single speed.

Power is supplied by a gasoline type, 6-cylinder, 4 cycle, water-cooled engine with overhead valves and removable wet-sleeve cylinders. Air compressor, carburetor, clutch, distributor, fuel pump, generator, oil filter, and starter are mounted on engine. The transmission mounted on rear of engine, has five speeds forward and one reverse. The transfer is mounted back of the transmission. The clutch is single dry-plate type attached to flywheel.

The cab is a metal, open top structure approximately 33 inches high, which surrounds the driver's compartment. A two-piece windshield is mounted at rear of cowl. An instrument panel, below windshield, serves as a support for steering jacket assembly, and as mounting for instruments and switches. The cab is furnished with adjustable driver's seat and a companion seat. Doors are provided at each side. Foot-operated ventilators are installed in lower portion of front panels. Tools are stored under driver's seat. The cab may be covered by a canvas tarpaulin or metal hard top closure.

The front winch assembly on vehicles so equipped is a worm-gear, jaw-clutch, single-drum assembly with an adjustable drag brake on the drum to prevent drum spin during free spooling of the drum line. The winch has an adjustable automatic worm brake for controlled lowering of a load.

Differences among models

Data plate location

Identification plates (nameplates) are located on the instrument panel in the cab of the truck chassis.

Classification

M46 w/wn—Standard B (OCTM 36841)
M46C w/o wn—Standard A (OTCM 36876)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	10,860 lb
W/winch	11,270 lb
Gross allowance:	
W/o winch:	
Off highway	18,060 lb
On highway	20,860 lb
W/winch:	
Off highway	18,480 lb
On highway	21,270 lb
Axle gear ratio	6.722:1
Axle load:	
Empty:	
W/o winch:	
Front	5,450 lb
Rear	5,410 lb
W/winch:	
Front	5,944 lb
Rear	5,326 lb
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	
Cross country	
Sand	
Tread, center-to-center, front	67⅝ in.
Ground clearance (lowest point)	12⅝ in.
Pintle height, empty	35⅞ in.
Frame height (at rear)	41¼ in.
Fuel octane rating	72 to 80
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission, w/power-take-off	4.25 qt
Transfer	7 qt
Axle (each)	7 qt
Winch (load capacity)	10,000 lb
Electrical system:	
Voltage	24 volt
Number of batteries	2
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air-hydraulic
Parking brake:	
Type	dual grip
Percentage of slope effective	60

CHARACTERISTICS—Continued

Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	gasoline; valve-in-head; 6 cyl
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.75:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum w/std accessories	127 @ 3,400 rpm
Maximum w/o std accessories	146 @ 3,400 rpm
Torque:	
Maximum w/std accessories	248 lb-ft @ 3,400 rpm
Maximum w/o std accessories	270 lb-ft @ 3,400 rpm
Transmission:	
Type	synchromesh
Forward speed	5
Gear ratio	High 1:1; Low 7.55:1
Transfer:	
Speeds	2
Gear ratio	high 1:1; low 1.98:1

PERFORMANCE

Computed grade ability in lowest gear	65 percent
Turning radius	45 ft
Fording depth:	
W/o kit	40 in.
W/kit	72 in.
Fuel consumption, loaded	7 mpg
Cruising range, loaded	350 mi
Allowable speed, governed	58 mph
Maximum pintle tow, gross:	
Off highway	6,000 lb
On highway	10,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022, C5.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

	M46 w/wn	*M46C* w/o wn
Shipped		
Length	336 in.	
Width	93 in.	
Height	82 in.	
Weight		
Volume	1,473 ft cu	
Area		
Gross weight	11,270 lb	
Ship tons	36.82	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-8023-1, TM 9-8023-2, SNL G-742, TM 9-2320-209-20P, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601.

CHASSIS, TRUCK: 2½-TON, 6 X 6, M57 W/ AND W/O WINCH

(Illustration will be added at a later date.)

Model	*Line item No.*	*Federal stock No.*
M57, w/winch		2320-690-7497
M57, w/o winch		2320-289-7215

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M57 w/ and w/o winch is the basic chassis for TRUCK, DUMP: M47*.

The truck chassis is equipped with one driving front axle and two driving rear axles. Provision is made for normal driving to be done by rear axles only.

Power is supplied by a gasoline type, 6-cylinder, 4-cycle, water-cooled engine with overhead valves and removable wet-sleeve cylinders. Air compressor, carburetor, clutch, distributor, fuel pump, generator, oil filter and starter are mounted on engine. The transmission mounted on rear of engine has five speeds forward and one reverse. The transfer is mounted back of the transmission. The clutch is a single dry-plate type attached to flywheel.

The cab is a metal open top structure; it may be covered by a canvas top or metal hardtop closure.

The front winch assembly, on vehicles so equipped, is a worm-gear, jaw-clutch, single-drum assembly with an adjustable drag brake on the drum to prevent drum spin during free spooling of the drum line. The winch has an adjustable automatic worm brake for controlled lowering of a load.

Differences among models

Data plate location

Classification: Standard

CHARACTERISTICS

Crew	2
Weight:	
Net:	
w/o winch	10,498 lb
w/ winch	10,828 lb
Gross allowance:	
w/o winch:	
Off highway	
On highway	
w/winch:	
Off highway	
On highway	
Axle gear ratio	
Axle load:	
Empty:	
w/o winch:	
Front	
Rear	
w/ winch:	
Front	
Rear	
Tires:	
Size	
Ply	
Pressure:	
Highway	
Cross country	
Sand	
Tread, center-to-center, front	
Ground clearance (lowest point)	
Frame height (at rear)	
Fuel octane rating	
Capacities:	
Fuel tank	
Cooling system	
Crankcase, refill	
Transmission	
Transfer	
Winch:	
Oil capacity	
Load capacity	10,000 lb
Electrical system:	
Voltage	24 volts
Number of batteries	2
Brakes:	
Manufacturer	
Type	air-hydraulic
Parking type	
Percent slope effective	
Engine:	
Manufacturer	Reo Motors Inc.
Model No.	OA-331
Type	gasoline, valve-in-head, 6 cylinders
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.75:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower (max):	
w/std accessories	
w/o std accessories	
Torque (max):	
w/std accessories	
w/o std accessories	
Transmission:	
Type	
Forward speeds	5
Gear ratio	
Transfer:	
Speeds	2
Gear ratio	

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*For characteristics and data see item on page 27-70A.

PERFORMANCE

Computed grade ability in lowest gear	
Turning radius	
Fording depth:	
w/o kit	
w/kit	
Fuel consumption, loaded	
Cruising range, loaded	
Allowable speed, governed	
Maximum tow load allowance:	
Off highway	
On highway	

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 truck chassis uncrated per flatcar.

Length:	
w/winch	239 in.
w/o winch	225½ in.
Width:	
w/winch	85 in.
w/o winch	85 in.
Height:	
w/winch	97-11/16 in.
w/o winch	97-11/16 in.
Volume:	
w/winch	1,152.2 cu ft
w/o winch	1,087.0 cu ft
Gross weight:	
w/winch	10,823 lb
w/o winch	10,493 lb
Ship tons:	
w/winch	28.88
w/o winch	27.18

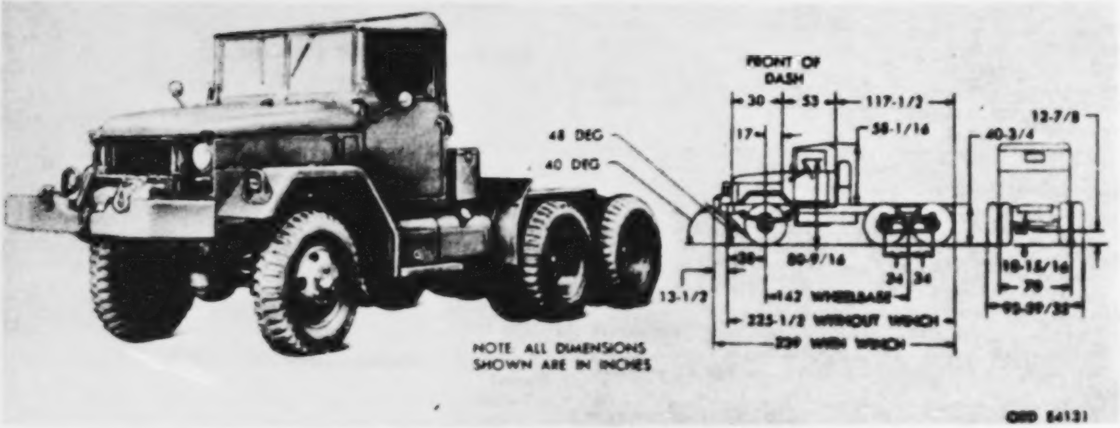
Outside Continental United States

Shipped 1 truck chassis uncrated.

Length:	
w/winch	239 in.
w/o winch	225½ in.
Width:	
w/winch	85 in.
w/o winch	85 in.
Height:	
w/winch	81-13/16 in.
w/o winch	81-13/16 in.
Volume:	
w/winch	964.0 cu ft
w/o winch	908.0 cu ft
Gross weight:	
w/winch	10,823 lb
w/o winch	10,493 lb
Ship tons:	
w/winch	24.1
w/o winch	22.7

References: LO 9-2320-209-12, TM 9-2320-209-35P, TM 9-8022.

CHASSIS, TRUCK: 2½-TON, 6 X 6, M58, W/ AND WO/WINCH



ORD 84131

Model	*Major item* Line item No.	Federal stock No.
M58 w/wn		2320-219-7331
M58, w/o wn		2020-690-7498

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M58 w/ and w/o wn, is the basic chassis for TRUCK, DUMP: M59, and TRUCK TRACTOR: M275, optional type bodies may be mounted to chassis for use as a Truck Tractor.

The truck chassis is equipped with one driving front axle and two driving rear axles. Provision is made for normal driving to be done by rear axles only. All axles are bevel drive top mounted, double reduction, single speed.

Power is supplied by a gasoline type, 6-cylinder, 4-cycle, water-cooled engine with overhead valves and removable wet sleeve cylinders. Air compressor, carburetor, clutch, distributor, fuel pump, generator, oil filter, and starter are mounted on engine. The transmission, mounted on rear of engine, has five speeds forward and one reverse. The transfer is mounted back of the transmission. The clutch is single dry-plate type attached to flywheel.

The cab is a metal open top structure approximately 33 inches high which surrounds the driver's compartment. A two-piece windshield is mounted at rear of cowl. An instrument panel, below windshield, serves as a support for steering jacket assembly, and as a mounting for instruments and switches. The cab is furnished with adjustable driver's seat and a companion seat. Doors are provided at each side. Foot-operated ventilators are installed in lower portion of front panels. Tools are stored under driver's seat. The cab may be covered by a canvas top paulin or metal hardtop closure.

The front winch assembly on vehicles so equipped is a worm-gear, jaw-clutch, single-drum assembly with an adjustable drag brake on the drum to prevent drum spin during free spooling of the drum line. The winch has an adjustable automatic worm brake for controlled lowering of a load.

Differences among models

Data plate location

Identification plates are located on the instrument panel in the cab of the truck chassis.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	10,441 lb
W/winch	10,851 lb
Gross allowance:	
W/o winch:	
Off highway	18,041 lb
On highway	23,841 lb
W/winch:	
Off highway	18,451 lb
On highway	24,251 lb
Axle gear ratio	6.722:1
Axle load:	
Empty:	
W/o winch:	
Front	5,236 lb
Rear	5,205 lb
W/winch:	
Front	5,738 lb
Rear	5,113 lb
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	
Cross country	
Sand	
Tread, center-to-center, front	67⅜ in.
Ground clearance (lowest point)	12⅝ in.
Frame height (at rear)	40⅝ in.
Fuel octane rating	80
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission	4.25 qt
Transfer	7 qt
Axles (each)	7 qt
Winch:	
Oil capacity	1 qt
Load capacity	10,000 lb
Electrical system:	
Voltage	24 volt
Number of batteries	2
Brakes:	
Manufacturer	Timken
Type	air-hydraulic
Parking, type	dual grip
Percent slope effective	60

CHARACTERISTICS—Continued

Engine:	
Manufacturer	
Reo Motors, Inc	Model OA-331
Continental	Model COA-331
Type	gasoline, valve-in-head, 6 cylinders
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.75:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower (max):	
W/std accessories	127 @ 3,400 rpm
W/o std accessories	145 @ 3,400 rpm
Torque (max):	
W/std accessories	248 lb-ft @ 1,400 rpm
W/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio	high 1:1; low 7.55:1
Transfer:	
Speeds	2
Gear ratio	high 1:1; low 1.96:1

PERFORMANCE

Computed grade ability in lowest gear	65 percent
Turning radius	35 ft
Fording depth:	
W/o kit	40 in.
W/kit	72 in.
Fuel consumption, loaded	6 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	62 mph
Maximum tow load allowance:	
Off highway	6,000 lb
On highway	10,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022, C5

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

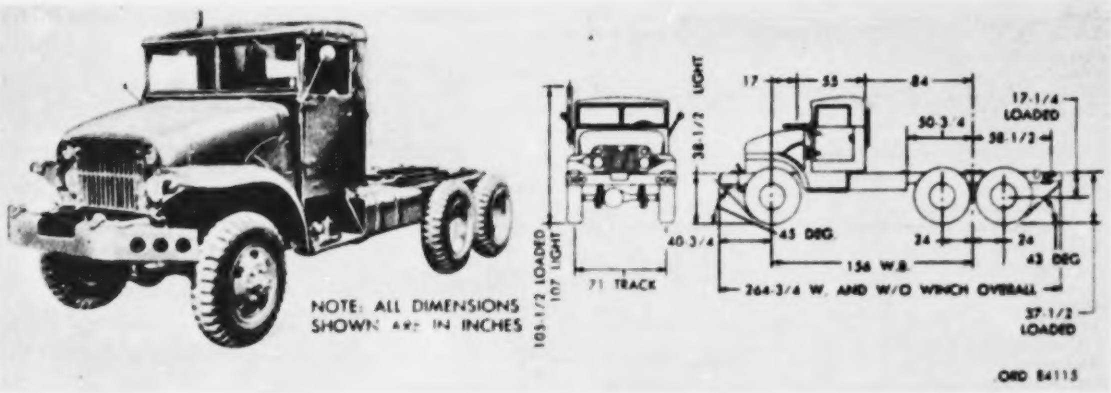
Shipped	*M36* w/o wn	*M36* w/wn
Length		323 in.
Width		93 in.
Height		120 in.
Volume		2,140 cu ft
Area		
Gross weight		13,400 lb
Ship tons		53.5

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-8023-1, TM 9-8023-2, SNL G742, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, TM 9-2320-209-20P

CHASSIS, TRUCK: 2½-TON, 6 X 6, M133, W/ AND W/O WINCH



Major item

Model	*Line item No.*	*Federal stock No.*
M133, w/wn		2320-200-1791
M133, w/o wn		2320-542-4297

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M133 w/ and w/o wn is the basic chassis for the cargo truck M135 or for mounting general purpose bodies.

All vehicles are equipped with one driving front axle and two driving rear axles. The cargo truck M135 is equipped with single front and rear tires.

Power is supplied by a gasoline, 6-cylinder in-line, valve-in-head engine, conventionally four-point mounted. Engine assembly and mounted accessories are accessible after hood is raised. A hydromatic transmission, mounted directly to engine, has four automatic forwarded speeds and one reverse in each of two ranges, high and low. A single-speed transfer, mounted to rear of transmission, transmits power through conventional propeller shafts to front and rear driving axles. A manually operated lever permits transfer to be placed in neutral or driving position.

The transfer is provided with an opening on the left side of the unit for mounting a power-take-off to operate winch equipment, or a power-take-off and accessory drive to operate dump body hoist, gasoline tank pump, water tank pump, and winch on vehicles so equipped.

Service brakes are air-actuated hydraulic-type, operating brakeshoes at all wheels. Air-actuated power cylinder transmits hydraulic pressure to dual wheel cylinders at each wheel. A contracting band-type parking brake assembly is mounted on output shaft at rear of transfer.

The vehicle is equipped with a three-man soft-top cab. The cab comprises a metal open top inclosure around driver's compartment with metal doors hinged to cab structure on each side.

Provisions have been made in the standard vehicle design to permit ready installation of winterization and deepwater fording equipment.

Differences among models

Data plate location

Identification plates (nameplate) are located on the instrument panel in the cab of the truck chassis.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	10,745 lb
W/winch	11,155 lb
Gross allowance:	
W/o winch:	
Off highway	17,680 lb
On highway	22,680 lb
W/winch:	
Off highway	18,090 lb
On highway	23,090 lb
Axle gear ratio	6.166:1
Axle load:	
Empty:	
W/o winch:	
Front	5,285 lb
Bogie	5,460 lb
W/winch:	
Front	5,725 lb
Bogie	5,430 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	
Cross country	
Sand	
Tread, center-to-center, front	71 in
Ground clearance	12½ in
Pintle height, empty	37½ in
Frame height (at rear)	40½ in
Fuel octane rating	80
Capacities:	
Fuel	56 gal
Cooling system	22 qt
Crankcase, refill	8½ qt
Transmission, w/power-take-off	14 qt
Transfer	3¼ qt
Axle:	
Front	7⅝ qt
Intermediate	6⅝ qt
Rear	5⅝ qt
Winch:	
Oil capacity	1¼ pt
Load capacity	10,000 lb
Electrical system:	
Voltage	24 volt
Number of batteries	2
Type ground	negative
Brakes:	
Service:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer

CHARACTERISTICS—Continued

Engine:	
Manufacturer	Gen. Motors Corp.
Model	302
Type	gasoline, valve-in-head, 6 cyl
Displacement	302 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum w/std accessories	130 @ 3,400 rpm
Maximum w/o std accessories	145 @ 3,400 rpm
Torque:	
Maximum w/std accessories	254 lb-ft @ 1,100–1,400 rpm
Maximum w/o std accessories	265 lb-ft @ 1,200–2,000 rpm
Transmission:	
Type	Hydromatic
Forward speeds	8
High range	High 0:1; low 4.07:1
Low range	High 3.82:1 low 15.55:1
Transfer:	
Speeds	1
Gear ratio	1.16:1

PERFORMANCE

Computed grade ability in lowest gear	60 percent
Turning radius	35 ft
Fording depth:	
W/o kit	50 in.
W/kit	80 in.
Fuel consumption, loaded	4 mpg
Cruising range, loaded	224 mi
Allowable speed, governed	58 mph
Maximum pintle tow:	
Off highway	(gross) 6,000 lb
On highway	(gross) 10,000 lb

EQUIPMENT

Basic Issue Items: **See TM 9-8024.**

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

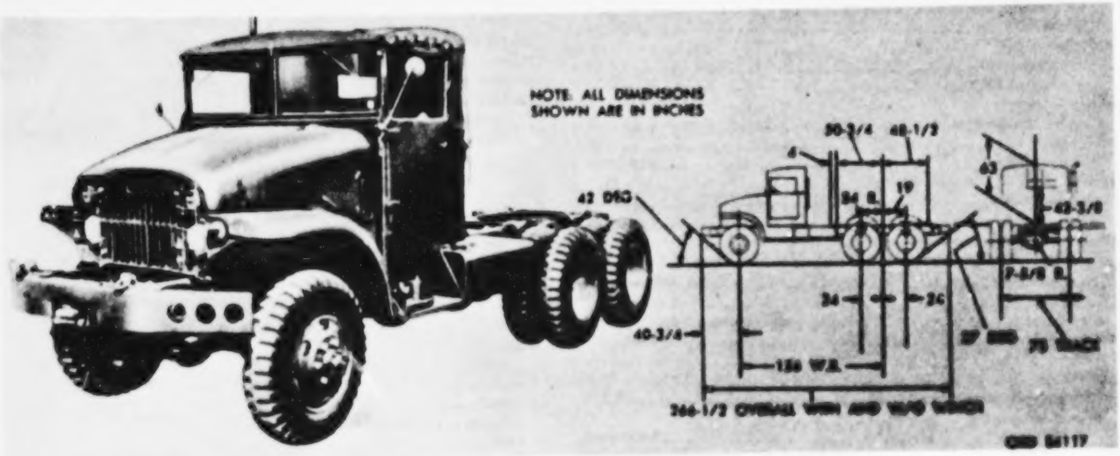
Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8024, TM 9-8025-1, TM 9-8025-2, SNL G-749, TM 9-2520-245-35 and 35P, TM 9-8647, TM 9-2920-210-34, TM 9-1825B, TM 9-8627, TM 9-1827A, TM 9-1827C, TM 9-8601, TM 9-1819AC, LO 9-8024.

CHASSIS, TRUCK: 2½-TON, 6 X 6, M207 AND M207C, W/ AND W/O WINCH


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
42 DEG
4
30-3/4
48-1/2
34 R.
19
63
42-3/8
7-5/8 R.
34
26
40-3/4
37 DEG
73 TRACK
156 W.B.
266-1/2 OVERALL WITH AND W/O WINCH

ORD 84117

Major item

Model	*Line item No.*	*Federal stock No.*
M207, w/wn		2320-691-1154
M207, w/e		2320-141-8545
M207C, w/wn		2320-174-9086
M207C, w/e		2320-174-9085

General

CHASSIS, TRUCK: 2½-ton, 6 x 6, M207 and M207C, w/ and w/o wn mount optional type bodies and are the basic chassis for cargo truck M211, gasoline line tank truck M217, shop van truck M220, and water tank truck M222.

All vehicles are equipped with one driving front axle and two driving rear axles.

Power is supplied by a gasoline, 6-cylinder in-line, valve-in-head engine, conventionally four-point mounted. Engine assembly and mounted accessories are accessible after hood is raised. A hydromatic transmission, mounted directly to engine, has four automatic forward speeds and one reverse in each of two ranges, high and low. A single-speed transfer, mounted to rear of transmission, transmits power through conventional propeller shafts to front and rear driving axles. A manually operated lever permits transfer to be placed in neutral or driving position.

The transfer is provided with an opening on the left side of the unit for mounting a power-take-off to operate winch equipment, or a power-take-off and accessory drive to operate dump body hoist, gasoline tank pump, water tank pump, and winch on vehicles so equipped.

Service brakes are air-actuated hydraulic-type, operating brakeshoes at all wheels. Air-actuated power cylinder transmits hydraulic pressure to dual wheel cylinders at each wheel. A contracting band-type parking brake assembly is mounted on output shaft at rear of transfer.

All vehicles, except shop van truck M220, are equipped with a three-man soft-top cab. The cab comprises a metal open top inclosure around driver's compartment with metal doors hinged to cab structure on each side.

Provisions have been made in the standard vehicle design to permit ready installation of winterization and deepwater fording equipment.

Differences among models

Chassis, truck, M207C is the same as M207 except it is equipped with walking beam suspension on rear axle. The M207C is used for truck, crane, 2½-ton, 6 x 6, M214 and truck, light wrecker, 2½-ton, 6 x 6, M218.

Data plate location

Identification plates (nameplate) are located on the instrument panel in the cab of the truck chassis.

Classification

M207 w/e—Standard B (OTCM 36841)
M207 w/wn—Standard B (OTCM 36841)
M207C w/e—Standard B (OTCM 36876)
M207C w/wn—Standard B (OTCM 36876)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	11,175 lb
W/winch	11,585 lb
Gross allowance:	
W/o winch:	
Off highway	18,575 lb
On highway	24,375 lb
W/winch:	
Off highway	18,575 lb
On highway	24,375 lb
Axle gear ratio	6.166:1
Axle load:	
Empty:	
W/o winch:	
Front	5,255 lb
Bogie	5,920 lb
W/winch:	
Front	5,695 lb
Bogie	5,890 lb
Tires:	
Size	9.00 x 20
Ply	8
Pressure	45 psi
Tread, center-to-center, front	69½ in.
Vehicle dimensions:	
Ground clearance (lowest point)	12 in.
Pintle height, empty	34¾ in.
Frame height (at rear)	39½ in.
Fuel octane rating	80
Capacities:	
Fuel tank	56 gal
Cooling system	22 qt
Crankcase, refill	8¾ qt
Transmission	15 qt
Transfer:	
W/o power-take-off	6½ pt
W/power-take-off	7½ pt

CHARACTERISTICS—Continued

Capacities—Continued	
Axles:	
Front	15½ pt
Intermediate	13½ pt
Rear	11½ pt
Winch:	
Oil capacity	1 qt
Load capacity	10,000 lb
Electrical system:	
Number of batteries	2
Voltage	24
Type of ground	negative
Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking brakes (type)	transfer
Engine:	
Manufacturer	Gen. Motors Corp.
Model	302
Type	gasoline, valve-in-head, 6 cyl. (in line)
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Max w/std accessories	130 @ 3,400 rpm
Max w/o std accessories	145 @ 3,400 rpm
Torque:	
Max w/std accessories	480 lb-ft @ 1,200 rpm
Max w/o std accessories	504 lb-ft @ 1,400 rpm
Transmission:	
Type	hydromatic
Forward speeds	8
Gear ratio:	
High range	high 1:1; low 4.076:1
Low range	high 3.82:1; low 15.67:1
Transfer:	
Speeds	1
Gear ratio	1.16:1

PERFORMANCE

Computed grade ability in lowest gear, loaded	66 percent
Turning radius	34 ft
Fording depth:	
W/o kit	30 in.
W/kit	80 in.
Fuel consumption, loaded	5.4 mpg
Cruising range, loaded	300 m
Allowable speed, governed	55 mph
Maximum tow load allowance:	
Off highway	6,000 lb
On highway	10,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–8024.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

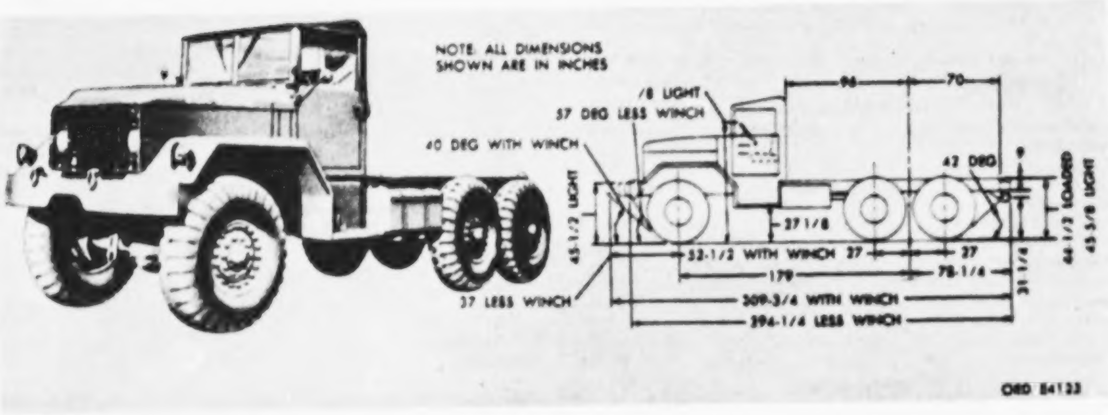
	M807C w/e	*M807C w/wn*	*M807 w/e*	*M807 w/wn*
Shipped				
Length				
Width				
Height				
Volume	1,160 cu ft	1,160 cu ft	1,160 cu ft	
Area				
Gross weight	11,175 lb	11,425 lb	11,175 lb	
Ship tons	29	29	29	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9–8024, TM 9–8025–1, TM 9–8025–2, SNL G–749, TM 9–2520–245–35 and 35P, TM 9–8647, TM 9–2920–210–34, TM 9–1825B, TM 9–8627, TM 9–1827A, TM 9–1827C, TM 9–8601, TM 9–1819AC, LO 9–8024

CHASSIS, TRUCK: 5-TON, 6 X 6, M39, W/ AND W/O WINCH



Major item

Model	*Line item No.*	*Federal stock No.*
M39, w/o wn		2320-174-1625
M39, w/wn		2320-174-1626

General

CHASSIS, TRUCK: 5-ton, 6 x 6, M39 w/ and w/o wn, is the basic chassis for the cargo truck M41. The chassis can be used as a general purpose or special equipment vehicle.

Both are six-wheel trucks equipped with one driving front axle and two driving rear axles.

Power is supplied by a 6-cylinder, 4-cycle, water-cooled, valve-in-head-type, gasoline engine. Accessories, such as generator, starter, distributor, oil filters, carburetor, and clutch are mounted on the engine. The transmission, mounted at the rear of the engine, has five speeds forward and one reverse. The clutch is of the single dry-disk-type and is attached to the engine flywheel. The transfer is a two-speed unit driven by the transmission and distributes power to the front and rear axles through propeller shafts.

Some of the trucks are equipped with a winch mounted at the front of the truck on support brackets attached to frame side extensions. Power for operating the front winch is supplied by a propeller shaft extending from the power-take-off, mounted on the right side of the transmission, to the winch drive shaft. On vehicles, which are not equipped with a front winch, frame extensions, winch support brackets, power-take-off, and winch propeller shaft are omitted, and the front bumper is inverted when assembled to the vehicle.

Differences among models

Data plate location

Identification plate is mounted on the instrument panel to the right of the instrument cluster.

Classification: Standard B (OTCM 37119)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	16,824 lb
W/winch	17,540 lb
Axle gear ratio	6.443:1.00
Tires:	
Size	14.00 x 20
Ply	12
Pressure:	
On highway	70 psi
Mud or snow	15 psi
Tread, center-to-center, front	70¾ in
Ground clearance	10½ in
Pintle height, loaded	28¾ in
Fuel octane rating	80
Capacities:	
Fuel	78 gal
Cooling system	44 qt
Crankcase, refill	21 qt
Transmission:	
W/power-take-off	11 qt
W/o power-take-off	9 qt
Transfer	5¼ qt
Axles:	
Front	12 qt
Rear	12 qt
Winch:	
Oil capacity (front)	2.5 pt
Load capacity (front)	20,000 lb
Electrical system:	
No. of batteries	2
Type of batteries	6TN 23
Engine:	
Manufacturer	Continental
Model	R-6602
Type	6 cyl, valve-in-head
Displacement	602 cu in
Bore	4⅞ in
Stroke	5⅜ in
Compression ratio	6.4:1
Governed speed	2,800 rpm
Brake horsepower, gross (max w/std accessories)	224 @ 2,800 rpm
Torque, gross (max w/std accessories)	504 lb-ft @ 1,400 rpm
Brakes:	
Manufacturer	Timken, Detroit
Type	internal-expanding
Service brake:	
Actuation	air-hydraulic
Drum size	16½ (dia) x 5½ w
Parking brake:	
Type	internal-external
Drum size	14 dia x 3 w
Transmission:	
Manufacturer	Spicer
Model	6352
Type	synchromesh
No. of speeds	5 forward, 1 reverse
Gear ratios:	
First	7.31:1
Second	4.08:1
Third	2.41:1
Fourth	1.43:1
Fifth	1.00:1
Reverse	7.33:1

CHARACTERISTICS—Continued

Transfer:	
Manufacturer	Timken, Detroit
Model	T–138
No. of speeds	2
Gear ratios:	
Front output shaft	high 1.068:1; low 2.163:1
Rear output shaft	high 1.00:1; low 2.024:1

PERFORMANCE

Max grade ability (lowest gear with off-highway load)	75.63%
Turning radius:	
W/winch	41 ft, 7 in.
W/o winch	41 ft, 1 in.
Fording depth:	
W/o fording kit	30 in.
W/fording kit	78 in.
Fuel consumption	4.44 mpg
Cruising range (loaded at 30 mph)	248 mi
Allowable speed (governed)	59 mph
Maximum allowable towed load:	
Cross-country	15,000 lb
Highway	30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–8028, C 7.

INSTRUCTIONAL MATERIAL

Graphic Training Aid: 9–25.

STORAGE AND SHIPMENT DATA

Within Continental United States

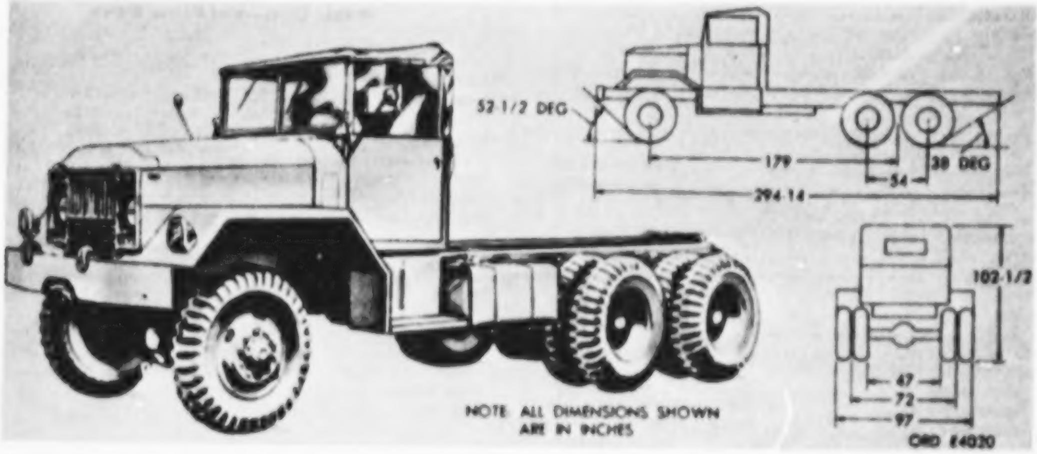
	M59 *w/wn*	*M59* *w/o wn*
Shipped		
Length	372 in.	372 in.
Width	114 in.	114 in.
Height	89 in.	89 in.
Volume	2,950 cu ft	2,950 cu ft
Area	295 sq ft	295 sq ft
Gross weight	20,000 lb	19,500 lb
Ship tons	73.75	73.75

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9–8028, TM 9–2320–211–20P, SNL G–744, TM 9–1837A and B, TM 9–1827A, TM 9–1827C, TM 9–8615, TM 9-2020–210–34, TM 9–1828A, TM 9–1825B, TM 9–8627, TM 9–8647, TM 9–8028, LO 9–8028.

CHASSIS, TRUCK: 5-TON, 6 X 6, M40 AND M40C, W/ AND W/O WINCH



Major item

Model	*Line item No.*	*Federal stock No.*
M40, w/e		2320-835-8349
M40, w/wn		2320-835-8350
M40C, w/wn		2320-219-7332

General

CHASSIS, TRUCK: 5-ton, 6 x 6, M40 and M40C w/ and w/o winch is a six-wheel truck equipped with one driving front axle and two driving rear axles. The chassis is used as component of general purpose or special equipment vehicles.

Power is supplied by a six cylinder, four cycle, water-cooled, valve-in-head-type, gasoline engine. Accessories, such as generator, starter, distributor, oil filters, carburetor, and clutch are mounted on the engine. The transmission, mounted at the rear of the engine, has five speeds forward and one reverse. The clutch is of the single dry-disk-type and is attached to the engine flywheel. The transfer is a two-speed unit driven by the transmission and distributes power to the front and rear axles through propeller shafts.

Some of the trucks are equipped with a winch mounted at the front of the truck on support brackets attached to frame side extensions. Power for operating the front winch is supplied by a propeller shaft extending from the power-take-off mounted on the right side of the transmission to the winch drive shaft. On vehicles which are not equipped with a front winch frame extensions, winch support brackets, power-take-off, and winch propeller shaft are omitted, and the front bumper is inverted when assembled to the vehicle.

Differences among models

The M40C is basically the same chassis as the M40 with the exception of being equipped with "walking beam" suspension and the frame being modified at the rear.

Data plate location

An identification plate is mounted on the instrument panel to the right of the instrument cluster.

Classification

M40 w/e—Standard A (OTCM 36841)
M40 w/wn—Standard A (OTCM 36841)
M40C w/wn—Standard A (OTCM 36841)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	16,786 lb
W/winch	17,501 lb
Axle gear ratio	6.443:1
Axle Load:	
Empty:	
W/o winch:	
Front	7,776 lb
Rear	4,505 lb
W/winch	
Front	8,627 lb
Rear	4,437 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure	70 psi
Tread, center-to-center, front	73⅝ in.
Ground clearance	10½ in.
Pintle height, empty	30⅝ in.
Frame height (at rear)	43⅞ in.
Fuel octane rating	80
Capacities:	
Fuel	78 gal
Cooling system	44 qt
Crankcase, refill	18 qt
Transmission, w/power-take-off	11 qt
Transfer	5.2 qt
Axles (each)	12 qt
Winch:	
Oil capacity	1.3 qt
Load capacity	20,000 lb
Electrical system:	
Number of batteries	2
Voltage	24
Type of ground	negative
Brakes:	
Service:	
Manufacturer	Timken
Type	hydraulic, air-actuated
Parking, type	dual grip
Engine:	
Manufacturer	Continental
Model	R-6602
Type	4 cycle, valve-in-head, No. of cyl (6)
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in.
Compression ratio	6.4
Governed speed:	
Full load	2,800 rpm
No load	2,950 rpm
Brake horsepower (max w/std accessories)	196 @ 2,800 rpm
Torque (max w/std accessories)	480 lb-ft @ 1,200 rpm

CHARACTERISTICS—Continued

Transmission:
- Type.....synchromesh
- Forward speeds.....5
- Gear ratio:
  - High.....1:1
  - 4th.....1.48:1
  - Low.....7.31:1

Transfer:
- Speeds.....2
- Gear ratio:
  - High front: 1.68.....Low front: 2.163
  - Rear: 1.000.....rear: 2.024

PERFORMANCE

Computed grade ability in lowest gear (with towed load off highway):
- W/winch.....49.93 percent
- W/o winch.....50.76 percent

Turning radius:
- W/winch.....40.583 ft
- W/o winch.....41.08 ft

Fording depth.....78 in.

Fuel consumption, loaded (at 30 mph w/winch off highway).....2.78 mpg

Cruising range, loaded.....217 mi

Allowable speed, governed.....52.5 mph

Max pintle tow, gross:
- Off highway.....15,000 lb
- On highway.....30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8028, C7.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

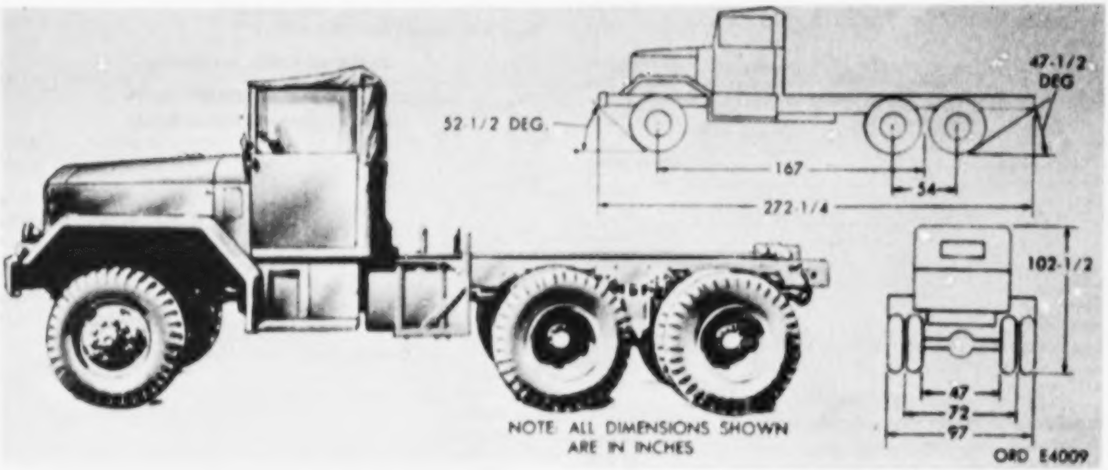
	M40C w/wn	*M40* w/wn	*M40* w/e
Shipped			
Length	310 .n.	310 in.	294 in.
Width	97 in.	97 in.	97 in.
Height	86 in.	86 in.	86 in.
Volume	1,500 cu ft	1,500 cu ft	1,410 cu ft
Area	209 sq ft	209 sq ft	198 sq ft
Gross weight	18,400 lb	17,501 lb	16,786 lb
Ship tons	37.25	37.5	35.25

Outside Continental United States

Shipped
- Length.....
- Width.....
- Height.....
- Volume.....
- Area.....
- Gross weight.....
- Ship tons.....

References: TM 9-8028, TM 9-1837A, TM 9-1837B, TM 9-1827A, TM 9-1827C, TM 9-8615, TM 9-2920-210-34, TM 9-1828A, TM 9-1825B, TM 9-8627, TM 9-8047, TM 9-2320-211-20P, SNL G-744, LO 9-8028.

CHASSIS, TRUCK: 5-TON, 6 X 6, M61, W/WINCH



Major item

Model	*Line item No.*	*Federal stock No.*
M61, w/wn		2320-835-8333
M61, w/e		2320-835-8332

General

CHASSIS, TRUCK: 5-ton, 6 x 6, M61 w/wn mounts optional type bodies or can be used as truck tractor. It is the basic chassis for the truck tractor M52.

The chassis is equipped with six wheels, one driving front axle, and two driving rear axles.

Power is supplied by a 6-cylinder, 4-cycle, water-cooled, valve-in-head-type, gasoline engine. Accessories, such as generator, starter, distributor, oil filters, carburetor, and clutch are mounted on the engine. The transmission, mounted at the rear of the engine, has five speeds forward and one reverse. The clutch is of the single dry-disk-type and is attached to the engine flywheel. The transfer is a two-speed unit driven by the transmission and distributes power to the front and rear axles through propeller shafts.

Some of the trucks are equipped with a winch mounted at the front of the truck on support brackets attached to the frame side extensions. Power for operating the front winch is supplied by a propeller shaft extending from the power-take-off mounted on the right side of the transmission to the winch drive shaft. On vehicles, which are not equipped with a front winch, frame extensions, winch support brackets, power-take-off, and winch propeller shaft are omitted, and the front bumper is inverted when assembled to the vehicle.

Differences among models

Data plate location

An identification plate (nameplate) is mounted on the instrument panel to the right of the instrument cluster.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	17,360 lb
W/winch	18,043 lb
Gross:	
W/o winch:	
Off highway	29,711 lb
On highway	39,711 lb
W/winch:	
Off highway	30,393 lb
On highway	40,394 lb
Axle gear ratio	6.443:1
Axle load:	
Empty:	
W/o winch:	
Front	8,060 lb
Rear (each)	4,650 lb
W/winch:	
Front	8,905 lb
Rear (each)	4,569 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure	70 psi
Tread, center-to-center, front	73⅝ in.
Ground clearance	10½ in.
Pintle height, empty	30⅝ in.
Frame height (at rear)	43⅞ in.
Fuel octane rating	80
Capacities:	
Fuel (two tanks)	(each) 55 gal
Cooling system	44 qt
Crankcase, refill	18 qt
Transmission, w/power-take-off	11 qt
Transfer	5.2 qt
Axles, each	12 qt
Winch:	
Oil capacity	1.3 qt
Load capacity	20,000 lb
Electrical system:	
Number of batteries	2
Type of ground	negative
Voltage	24 volts
Brakes:	
Service:	
Manufacturer	Timken
Type	hydraulic, air-actuated
Parking brake, type	dual grip
Engine:	
Manufacturer	Continental
Model	R-6602
Type	4 cycle, valve-in-head, (in line)
Number of cylinders	6
Displacement	602 cu in.

CHARACTERISTICS—Continued

Engine—Continued
- Bore....4⅞ in.
- Stroke....5⅜ in.
- Compression ratio....6.4
- Governed speed:
  - Full load....2,800 rpm
  - No load....2,950 rpm
- Brake horsepower (max w/std accessories)....196 @ 2,800 rpm
- Torque (max w/std accessories)....480 lb-ft @ 1,200 rpm

Transmission:
- Type....synchromesh
- Forward speeds....5
- Gear ratio:
  - High....1.00:1
  - 4th....1.43:1
  - Low....7.31:1

Transfer:
- Speeds....2
- Gear ratio:
  - High, front: 1.068....Low, front: 2.163
  - High, rear 1.000....Low, rear 2.024

PERFORMANCE

Computed grade ability in lowest gear (with towed load, off highway):
- W/winch....49.32%
- W/o winch....51.07%

Turning radius:
- W/winch....39.20 ft
- W/o winch....38.75 ft

Fording depth....78 in.

Fuel consumption, loaded (at 30 mph ,w/winch, off highway)....2.79 mpg

Cruising range, loaded....307 mi

Allowable speed, governed....52.6 mph

Max pintle tow, gross:
- Off highway....15,000 lb
- On highway....30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–8028, C 7.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

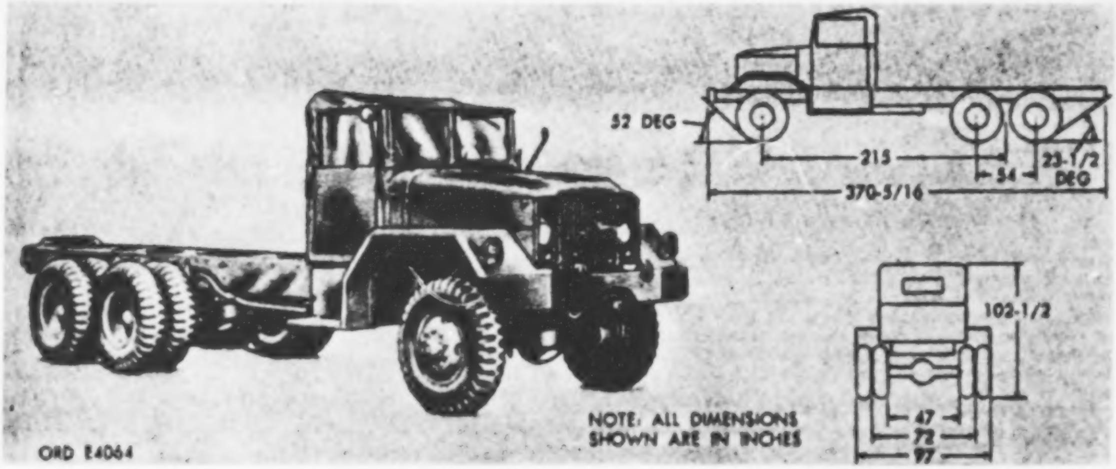
	M61 *w/o*	*M61* *w/wn*
Shipped		
Length	272 in.	288 in.
Width	97 in.	97 in.
Height	86 in.	86 in.
Volume	1,300 cu ft	1,390 cu ft
Area	194 sq ft	194 sq ft
Gross weight	17,860 lb	18,043 lb
Ship tons	32.5	34.75

Outside Continental United States

Shipped
- Length....
- Width....
- Height....
- Volume....
- Area....
- Gross weight....
- Ship tons....

References: TM 9–8028, SNL G–744, TM 9–1887A, TM 9–1887B, TM 9–1827A and C, TM 9–8615, TM 9–1828A, TM 9–2920–21084, TM 9–1825B, TM 9–8627, TM 9–8647, TM 9–2820–211–20P, LO 9–8028.

CHASSIS, TRUCK: 5-TON, 6 X 6, M63 AND M63C



Major item

Model	*Line item No.*	*Federal stock No.*
M63, w/e		2320-835-8330
M63, w/wn		2320-835-8331
M63C, w/wn		2320-215-4210

General

CHASSIS, TRUCK: 5-ton, 6 x 6, M63 and M63C, is equipped with six wheels, one driving front axle, and two driving rear axles. The chassis is used for mounting general purpose bodies or special bodies.

Power is supplied by a 6-cylinder, 4-cycle, water-cooled, valve-in-head-type, gasoline engine. Accessories, such as generator, starter, distributor, oil filters, carburetor, and clutch are mounted on the engine. The transmission, mounted at the rear of the engine, has five speeds forward and one reverse. The clutch is of the single dry-disk-type and is attached to the engine flywheel. The transfer is a two-speed unit driven by the transmission and distributes power to the front and rear axles through propeller shafts.

Some of the trucks are equipped with a winch mounted at the front of the truck on support brackets attached to frame side extensions. Power for operating the front winch is supplied by a propeller shaft extending from the power-take-off mounted on the right side of the transmission to the winch drive shaft. On vehicles which are not equipped with a front winch, frame extensions, winch support brackets, power-take-off, and winch propeller shaft are omitted, and the front bumper is inverted when assembled to the vehicle.

Differences among models

The M63C is basically the same chassis as the M63 with the exception of being equipped with "walking beam" suspension and the frame being modified at the rear.

Data plate location

An identification plate is mounted on the instrument panel to the right of the instrument cluster.

Classification

M63 w/e—Standard A (OTCM 36841)
M63 w/wn—Standard A (OTCM 36841)
M63C w/wn—Standard A (OTCM 36876)

CHARACTERISTICS

Crew	2
Weight	
Net	
W/o winch	19,242 lb
W/winch	

CHARACTERISTICS—Continued

Weight—Continued	
Gross	
Off highway	31,892 lb
On highway	41,892 lb
Axle gear ratio	6.443:1
Axle load	
Empty w/o winch	
Front	8,364 lb
Rear	5,439 lb
Tires	
Size	11.00 x 20
Ply	12
Pressure	70 psi
Tread, center-to-center, front	73⅝ in.
Ground clearance	10⅛ in.
Pintle height, empty	30⅝ in.
Frame height	43⅛ in.
Fuel octane rating	80
Capacities	
Fuel	78 gal
Cooling system	44 qt
Crankcase, refill	16 qt
Transmission, w/power-take-off	11 qt
Transfer	5.2 qt
Axles, each	12 qt
Electrical system	
Number of batteries	2
Type of ground	negative
Voltage	24
Brakes	
Service	
Manufacturer	Timken
Type	hydraulic, air-actuated
Parking, type	dual grip
Engine	
Manufacturer	Continental
Model	R-6602
Type	4 cycle, valve-in-head, 6 (in line) cyl
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in.
Compression ratio	6.4
Governed speed	
Full load	2,800 rpm
No load	2,950 rpm
Brake horsepower (max w/std accessories)	196 @ 2,800 rpm
Torque (max w/std accessories)	480 lb-ft @ 1,200 rpm

CHARACTERISTICS—Continued

Transmission:	
Forward speeds	5
Type	synchromesh
Gear ratio:	
High	1.00:1
4th	143:11
Low	7.31:1
Transfer:	
Speeds	2
Gear ratio:	
High, front:1.068	Low, front:2.163
High, rear:1.000	Low, rear: 2.024

PERFORMANCE

Computed grade ability in lowest gear (with towed load, off highway, w/o winch)	48.02 percent
Turning radius (w/o winch)	46.106 ft
Fording depth	78 in.
Fuel consumption, loaded (@ 30 mph w/o winch off highway)	2.78 mpg
Cruising range, loaded (@ mph w/o winch off highway)	217 mi
Allowable speed, governed	52.6 mph
Max pintle tow, gross:	
Off highway	15,000 lb
On highway	30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-2320-211-10.

INSTRUCTIONAL MATERIAL STORAGE AND SHIPMENT DATA

Within Continental United States

	M63 /c	*M63 w/wn*	*M63C w/wn*
Shipped:			
Length			
Width			
Height			
Volume	2,169 cu ft	2,250 cu ft	
Area	263 sq ft	259 sq ft	259 sq ft
Gross weight	19,242 lb	19,942 lb	25.176 lb
Ship tons			

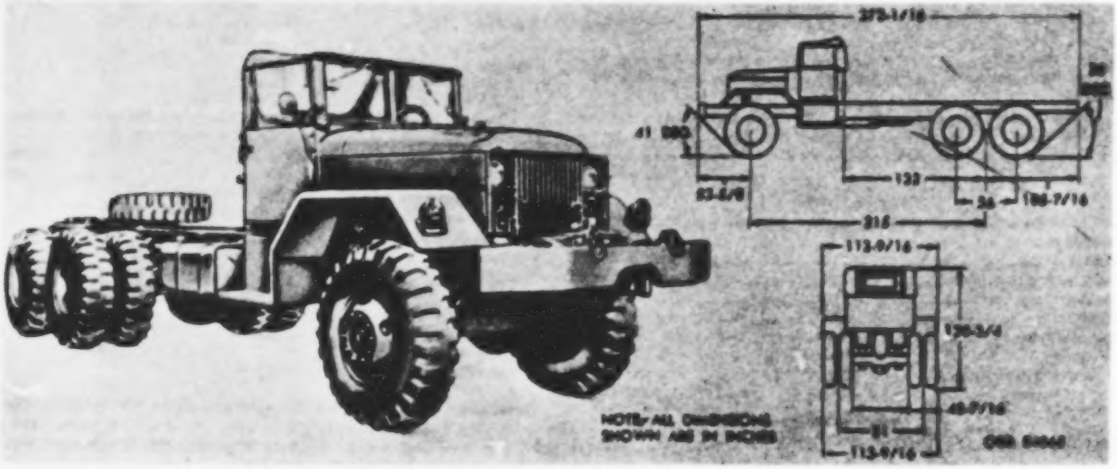
Outside Continental United States

Shipped:	
Length	
Width	
Height:	
Volume	
Area	
Gross weight	
Ship tons	

References:

TM 9-1827A, TM 9-1827C, TM 9-1825B, TM 9-1828A, TM 9-8615, TM 9-8627, TM 9-8647, TM 9-2320-211-10, TM 9-2320-211-20, TM 9-2320-211-20P, TM 9-2320-211-35, TM 9-2320-211-35P, TM 9-2805-203-35, LO 9-2320-211-12.

CHASSIS, TRUCK: 5-TON, 6 X 6, M139, M139C, AND M139D



Major item

Model	*Line item No.*	*Federal stock No.*
M139, w/wn		2320-835-8347
M139C, w/e		2320-212-9030
M139D, w/e		2320-348-7797

General

CHASSIS, TRUCK: 5-ton, 6 x 6, M139, M139C, and M139D, is equipped with six wheels, one driving front axle, and two driving rear axles. This chassis can be used as a component of general purpose or special equipment vehicles.

Power is supplied by a 6-cylinder, 4-cycle, water-cooled, valve-in-head-type, gasoline engine. The transmission, mounted at the rear of the engine, has five speeds forward and one reverse. The clutch is of the single dry-disk-type and is attached to the engine flywheel. The transfer is a two-speed unit driven by the transmission and distributes power to the front and rear axles through propeller shafts.

Some of the trucks are equipped with a winch mounted at the front of the truck on support brackets attached to frame side extensions. Power for operating the front winch is supplied by a propeller shaft extending from the power-take-off mounted on the right side of the transmission to the winch drive shaft. On vehicles, which are not equipped with a front winch, frame extensions, winch support brackets, power-take-off, and winch propeller shaft are omitted, and the front bumper is inverted when assembled to the vehicle.

Differences among models

Chassis truck M139 is specifically designed for the transporting of bridge building equipment.

Chassis truck M139C is specifically designed for transporting the 762-mm rocket launcher.

Chassis trucks M139C and M139D are equipped with high reduction axles to increase tractive power, and modified front cross member.

Chassis truck M139D has rear axle 1.02 to 1 and jack bracket supports.

Data plate location

An identification plate (nameplate) is mounted on the instrument panel to the right of the instrument cluster.

Classification

M139—Standard A (OTCM 36841)
M139C—Standard B (OTCM 37119)
M139D—Standard B (OTCM 37119)

CHARACTERISTICS

Crew	2
Weight, net	19,590 lb
Max gross	42,000 lb
Axle gear ratio	6.443:1
Axle load (empty):	
Front	9,070 lb
Rear (each)	10,520 lb
Tires:	
Size	14.00 x 20
Ply	12
Pressure	45 psi
Tread, center-to-center, front	76⅝ in.
Ground clearance	13 in.
Pintle height, empty	33 in.
Frame height	45⅝ in.
Fuel octane rating	80
Capacities:	
Fuel	70 gal
Cooling system	44 qt
Crankcase, refill	22 qt
Transmission, w/power-take-off	11 qt
Transfer	5 qt
Axle, each	12 qt
Winch:	
Oil capacity	1½ qt
Load capacity	20,000 lb
Electrical system:	
Voltage	24
Number of batteries	2
Type of ground	negative
Brakes:	
Service:	
Manufacturer	Timken, Bendix, Westinghouse
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	Continental
Model	R6602
Type	4 cycle, valve-in-head, 6 cyl (in line)
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in.
Compression ratio	6.4:1
Governed speed	2,800 rpm
Brake horsepower (max w/std accessories)	196 @ 2,800 rpm
Torque (max w/std accessories)	480 lb-ft @1,200 rpm

CHARACTERISTICS—Continued

Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Fourth	1.43:1
Low	7.31:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	2.024:1

PERFORMANCE

Computed grade ability in lowest gear w/off highway load	43 percent
Turning radius	47 ft
Fording depth	78 in.
Fuel consumption, loaded	3.2 mpg
Cruising range, loaded	224 mi
Allowable speed, governed	59 mph
Max pintle tow:	
Gross:	
Off highway	15,000 lb
On highway	30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8028, C 7.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

	M139 *w/wn*	*M139C* *w/e*	*M139D* *w/e*
Shipped			
Length	373 in.		
Shipped			
Width	115 in.		
Height	89 in.		
Volume	2,208 cu ft	2,208 cu ft	2,208 cu ft
Area	295 sq ft	295 sq ft	
Gross weight	20,365 lb	20,365 lb	20,365 lb
Ship tons	55.20	55.20	55.20

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8028, SNL G-744, TM 9-1837A, TM 9-1837B, TM 9-1827A, TM 9-1827C, TM 9-8615, TM 9-1828A, TM 9-2920-210-34, TM 9-1825B, TM 9-8627, TM 9-8647, TM 9-2320-211-20P, LO 9-8028.

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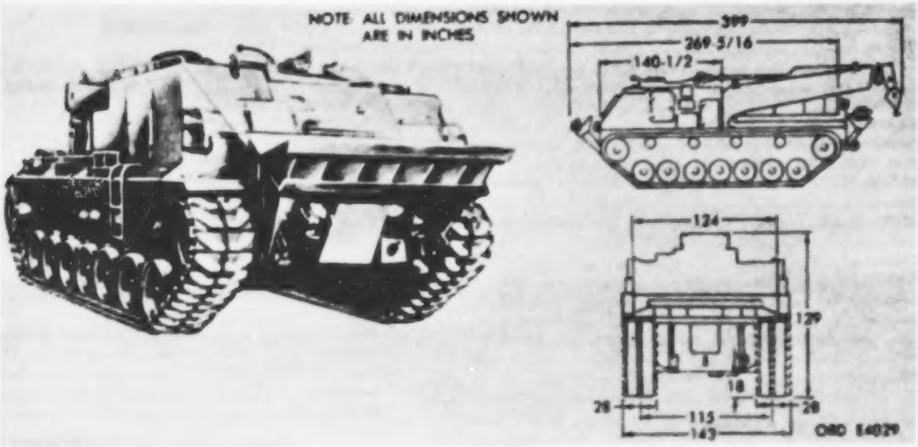
RECOVERY VEHICLE, FULL TRACKED: HEAVY, M51, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M51	4-44245-00	2320-835-8713

General

RECOVERY VEHICLE, FULL TRACKED: heavy M51, is a full-tracked-laying vehicle designed to recover disabled tanks and mechanized equipment weighing 50 to 60 tons. To perform these operations the vehicle is equipped with a 30 ton capacity crane, a 45-ton capacity main winch and a 5-ton capacity auxiliary winch, all of which are powered hydraulically. Two spades mounted, one on the front and rear are used to anchor the vehicle against the pull of the winch, and support the rear of the vehicle when lifting heavy loads with the crane. The front spade may also be used for clearing sites for recovery operations.

The vehicle is powered by a 4-cycle, valve-in-head, 90-degree v, supercharged, fuel injection engine. Power is transmitted to the final drives through a cross-drive transmission.

The vehicle is equipped with torsion bar suspension and individually sprung road wheels.

The vehicle hull is constructed of welded armor plate, and is divided into three compartments. The front compartment, which includes the cab, houses the winches, front fuel tank, fixed fire extinguisher cylinders and pump and electric motors. The center compartment houses the crane and crane base. The rear compartment houses the power plant, rear fuel tank, main fuel tank, main hydraulic pump, supercharge pump, hydraulic oil tank power takeoff and the auxiliary generator and engine.

Differences among Models

Data plate location

The data plate is located on the left front side of the driver's compartment.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Crew	4
Length, overall	399 in.
Length (front spade to)	$269\frac{5}{16}$ in.
Width, overall	143 in.
Width of cab	124 in.
Height, overall	129 in.
Armament:	
MACHINE GUN, CALIBER .50: Browning, M2, heavy barrel, flexible, mounted on AA mount on commander's cupola	1
SUBMACHINE GUN, CALIBER .45: M3A1	1
CARBINE, CALIBER .30: M2	1
LAUNCHER, ROCKET: 3.5-inch, M20	1
Tracks:	
Width	28 in.
Tread (center to center of track)	115 in.
Outside to outside of track	143 in.
Angle of approach	
Angle of departure	
Type of fuel	gasoline
Center of gravity above ground	53 in.
Weight of vehicle:	
Crew and equipment	120,000 lb
Empty	113,000 lb
Length of track on ground	$173\frac{7}{8}$ in.
Ground contact area —0 inch penetration	
Ground clearance	18 in.
Ground pressure	12.2 psi
Pintle height (loaded)	36 in.
Front of hull to	$140\frac{1}{2}$ in.
Electrical system	24 volts
No. of batteries and type	6 in., 4
Type of ground	negative
Main generator	amps 300
Auxiliary generator	amps 240
Fuel octane rating	80
Capacities:	
Fuel (total)	400 gal
Oil tank (hydraulic system)	140 qt
Crankcase, refill (without cooler, cores, and lines)	64 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	68 qt
Final drive	

Brakes: self-energized, multiple plate, wet in final output reduction sections.

Transmission:	
Manufacturer	General Motors
Model	XT-1400-2A
Type	cross-drive
Number of ranges:	
Forward	3
Reverse	1
Ratio from torque converter output shaft to final drive flange:	
High range	6.8:1
Low range	112:1
Reverse range	112:1
Final drive gear ratio	4.63:1

CHARACTERISTICS—Continued

Engine:	
Manufacturer	Continental
Model	AVSI-1790-6
Type	4 cycle, valve-in-head, 90° V, supercharged, fuel injection
Displacement	1,790 cu in.
No. of cylinders	12
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	6.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	1,020 @ 2,800 rpm
Torque, gross (max w/std accessories)	1,900 ft-lb @ 2,200 rpm
Type of ignition	scintilla, high tension magnetos
Auxiliary engine	ORD No. 7402950
Manufacturer	General Motors
Model	A-41-2
Type	4 cycle, gasoline
No. of cylinders	1
Bore	3¼ in.
Stroke	4 in.
Cooling	forced air
Oil capacity	3 qt
Horsepower	15
Ignition	magneto

AMMUNITION

Cal. .50	1,500 rds
Cal. .45	180 rds
Cal. .30	540 rds
Launcher, rocket, M20	6 rds
Hand grenades	32

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot to infinity
Fording depth	
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	109 in.
Fuel consumption (average conditions)	0.5 mpg
Allowable speed recommended	30 mph
Maximum allowable towed load, gross	120,000 lb
Cruising range (average conditions)	200 mi

EQUIPMENT

Communications:	
Radio set	(AN/GRC-3, -4, -7, -8, -13, -14, or -15) interphone station for commanders

* **Sighting and Fire Control:**

PERISCOPE: M17
PERISCOPE: M19
Basic Issue Items: See TM 9-2320-204-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	299 in.
Width	143 in.
Height	129 in.
Volume	4,260 cu ft
Area	400 sq ft
Gross weight	120,000 lb
Ship tons	106.50

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2320-204-12, TM 9-2320-204-20P, TM 9-2320-204-35, SM 9-4-4910-V01, SNL G274, LO 9-2320-204-10.

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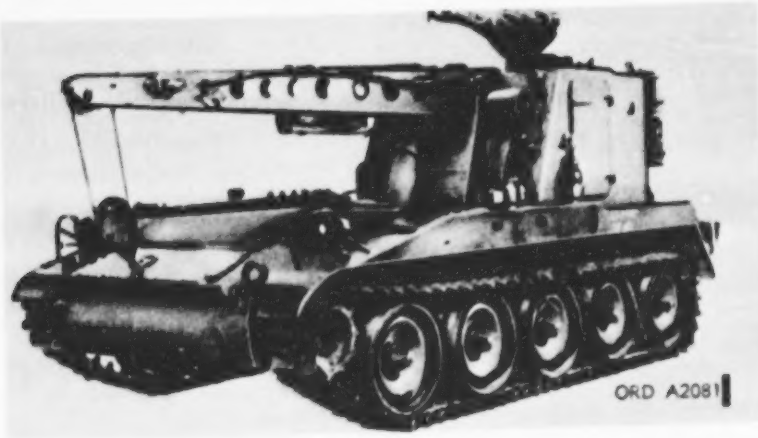
* For characteristics and data, see item in section 27.

RECOVERY VEHICLE, FULL TRACKED: light, armored, M578 (T120E1), W/E



Model	*Line item No.*	*Federal stock No.*
M578 (T120E1)	4-35305-10	2320-439-6242

General

RECOVERY VEHICLE, FULL TRACKED: light, armored, M578 (T120E1) is a low, all-welded steel hulled, full tracked vehicle with an armored, independently operated cab and crane mounted on the hull near the rear of the vehicle. The hull, power plant, and running gear are similar to those of HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 *. It is used to recover mechanized equipment which has been bogged down, turned over, or become so disabled it cannot be towed readily. The vehicle can also be used as a wrecker to tow disabled vehicles or as a crane at a repair base.

Differences among models

Data plate location

Classification: Standard A (AMCTCM 356).

CHARACTERISTICS

Crew	3
Length, overall (crane in travel position)	250¾ in.
Length of vehicle	219 in.
Width, overall	124 in.
Height, overall (crane in travel position)	130½ in.
Height (to top of cupola)	115 in.
Height of lifting hook	
Height of boom	97½ in.
Armament:	
MACHINE GUN, CALIBER .50: M2 or M85	1
RIFLE, 7.62 MILLIMETER: M14	3
Tracks:	
Width	18 in.
Tread (center to center of track)	106 in.
Outside to outside of track	124 in.
Wheelbase	148¼ in.
Angle of approach	70 deg
Angle of departure	30 deg
Type of fuel	(VV-F-800) diesel
Center of gravity above ground	40 in.
Weight of vehicle:	
w/crew and equipment	54,000 lb
Air transport	47,000 lb

Length of track on ground	148¼ in.
Ground contact area —0-inch penetration	
Ground clearance	17.38 in.
Ground pressure	10.1 psi
Pintle height	27.13 in
Electrical system	24 volt
Number of batteries	4
Type of ground	Negative
Generator (Jack and Heintz, Model 30010-000)	300 amp
Fuel cetane rating (minimum)	40
Capacities:	
Hydraulic system	165 gal
Fuel	320 gal
Cooling system	22 gal
Crankcase, refill (w/o cooler, cores, and lines)	26 qt
Transmission, differential, and final drives, refill (w/o cooler, cores, and lines)	
Brakes (service and parking) wet friction disk, mechanical	
Transmission:	
Manufacturer	Allison Div (GMC)
Model	XTG-411-2A
Type	Cross drive
Number of ranges:	
Forward	4
Reverse	2
Ratio from torque converter output shaft to final drive flange:	
High range	0.78:1
Low range	4.68:1
Reverse range	R-1-5.59:1 R-2-3.78:1
Final drive gear ratio	5.85:1
Engine:	
Manufacturer	General Motors Detroit Diesel
Model	8V71T
Type	V, liquid cooled, turbocharged 2 cycle diesel
Displacement	564 cu in.
Number of cylinders	8
Bore	4.25 in.
Stroke	5 in.
Compression ratio	17:1
Maximum governed speed:	
No load	2,450 rpm
Hydraulic pump engaged	1,250 rpm

* For characteristics and data, see item in section 23.

Brake horsepower, gross	425 @ 2,800 rpm
Torque, gross (max w/std accessories)	950 lb-ft @ 1,700 rpm
Type of ignition	Compression

Boom and winch data:

Boom:

Type	tapered box construction
Capacity	15 ton
Traverse	360 deg
Hoist winch capacity	30,000 lb
Tow winch capacity	60,000 lb

AMMUNITION

Cal. .50	500 rounds
7.62-mm	450 rounds

PERFORMANCE

Maximum grade ability	60%
Turning radius (minimum)	15 ft
Fording depth (including low wave)	42 in.
Maximum vertical obstacle vehicle can climb	3 ft, 4 in.
Maximum width of ditch vehicle can cross	7 ft, 9 in.
Fuel consumption (average conditions)	1.5 mpg
Allowable speed, recommended	37 mph
Maximum allowable towed load, gross	60,000 lb
Cruising range (average conditions)	450 mi

EQUIPMENT

Communication:

Radio set, VRC/13, 14, or 15
Radio set AN/VRC-46 w/interphone

Sighting and fire control: **

Binocular: M17A1
Periscope, TANK: M17

Basic Issue Items: See TM 9-2320-238-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 recovery vehicle, uncrated:

Length	250.25 in.
Width	124.0 in.
Height	115.0 in.
Volume	2,070 cu ft
Area	216 sq ft
Gross weight	54,000 lb
Ship tons	51.75

Outside Continental United States

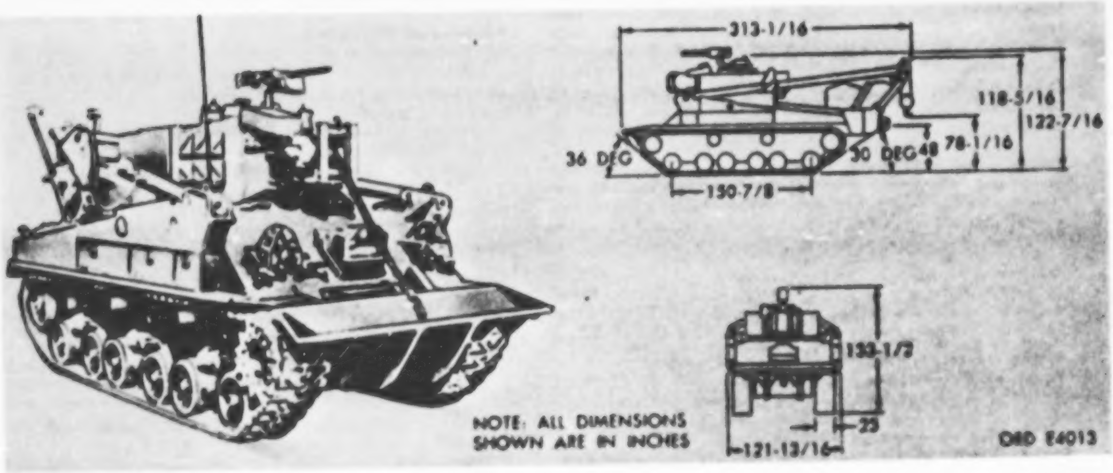
Shipped 1 recovery vehicle, uncrated:

Length	250.25 in.
Width	124.0 in.
Height	115.0 in.
Volume	2,070 cu ft
Area	216 sq ft
Gross weight	54,000 lb
Ship tons	51.75

References: TM 9-2320-238-10, LO 9-2320-238-12.

** For characteristics and data, see item section 27.

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M74



Major item

Model	*Line item No.*	*Federal stock No.*
M74	4-44250-40	2320-835-8646

General

RECOVERY VEHICLE, FULL TRACKED: medium, M74, is a full-track-laying, low-silhouette vehicle built on the medium tank M4A3 chassis. The vehicle is designed for recovering vehicles in the medium and light tank class. The vehicle is powered by an 8-cylinder, V-type, 4-cycle, water-cooled engine with overhead valves and two overhead camshafts, one for each bank of 4 cylinders. Power is transmitted to the final drives through a combined transmission, differential and steering unit.

The vehicle utilizes the horizontal suspension system.

The hull of the vehicle is a welded steel structure, except for two access plates and an escape door on the bottom of the hull. The hull is divided into three compartments: the driver's compartment at the front, engine compartment at the rear, and winch compartment between the two. The (fixed) turret mounts the auxiliary winch and the commander's cupola. Boom cable doors are provided at the front and rear of the turret to allow the boom winch cable to pass through. The turret is also equipped with an escape hatch, portable spotlight reel, and mounting brackets for a LAUNCHER, ROCKET: 3.5 inch, M20 and a cal .50 machine gun mount. A spade is provided to stabilize the vehicle during heavy lifting or winching operations, or as a bulldozer blade. Release, height adjustment and stowage is accomplished from the inside.

Differences among models

Data plate location

The data plate is located on the left front sponson.

Classification: Standard B (OTCM 37028).

CHARACTERISTICS

Crew	4
Length, overall	$313\frac{1}{16}$ in.
Length of vehicle	
Width, overall	$121\frac{13}{16}$ in.
Height, overall	$133\frac{1}{2}$ in.
Height (to top of cupola)	$122\frac{7}{16}$ in.
Height of lifting hook	$78\frac{1}{16}$ in.
Height of boom	$118\frac{5}{16}$ in.
Armament:	
LAUNCHER, ROCKET: 3.5-inch, M20	1
MACHINE GUN, CALIBER .50: Browning, M2, heavy barrel, flexible	1
MACHINE GUN, CALIBER .30: Browning, M1919A4, flexible	1
Tracks:	
Width	23 in.
Rubber	T84
Steel	T80E8
Tread (center to center of track)	
Outside to outside of track	
Wheel base	$150\frac{7}{8}$ in.
Angle of approach	30°
Angle of departure	30°
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	93,750 lb
Empty	88,600 lb
Length of track on ground	$150\frac{7}{8}$ in.
Ground contact area —0 inch penetration	6,944 sq in
Ground clearance	15.5 in.
Ground pressure	13.6 psi
Pintle height (loaded)	48 in.
Electrical system	24 volts
Number of batteries	4
Type of ground	negative
Main generator	50 amps
Fuel octane rating	80
Capacities:	
Hydraulic system	100 gal
Fuel (total)	168 gal
Cooling system	56 qt
Crankcase, refill (without cooler, cores, and lines)	32 qt
Transmission, differential, and final drives, refill (without cooler, cores, and lines)	164 qt
Brakes	mechanically-controlled differential steering lever
Transmission:	
Manufacturer	
Model	
Type	synchromesh-conventional
No. of ranges:	
Forward	5
Reverse	1
Gear ratio:	
First	7.56:1
Second	3.11:1
Third	1.78:1
Fourth	1.11:1
Fifth	0.73:1
Reverse	5.63:1
Right angle drive ratio	3.53:1

CHARACTERISTICS—Continued

Final drive gear ratio	3.36:1
Engine:	
Manufacturer	Ford
Model	GAA
Type	4-cycle, valve-in-head (60° V) water-cooled
Displacement	1,100 cu in.
No. of cylinders	8
Bore	5.4 in.
Stroke	6 in.
Compression ratio	7.5:1
Max governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)—525 at	2,800 rpm
Torque, gross (max w/std accessories)—980 ft-lb at	2,400 rpm
Type of ignition	magneto

AMMUNITION

Cal. .30 machine gun	2,000 rd
Cal. .50 machine gun	1,050 rd
3.5-inch rockets	6 rd
Hand grenades	8

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	37 ft
Fording depth:	
w/o deep-water fording kit	
w/deep-water fording kit	36 in.
Maximum vertical obstacle vehicle can climb	24 in.
Maximum width of ditch vehicle can cross	90 in.
Fuel consumption (average conditions)	0.6 mpg
Allowable speed, recommended	21 mph
Maximum allowable towed load, gross	100,000 lb
Cruising range (average conditions)	100 mi

EQUIPMENT

Communications:

Radio and interphone	AN/GRC-4, -6, or -8 or AN/VRC-13, -14 or -15, or AN/UIC-1

* Sighting and Fire Control:
PERISCOPE: M13
PERISCOPE: M19

Basic Issue Items: See ORD 7 SNL G-281

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	313 in.
Width	122 in.
Height	133 in.
Volume	2,658.2 cu ft
Area	264 sq ft
Gross weight	88,600 lb
Ship tons	66.45

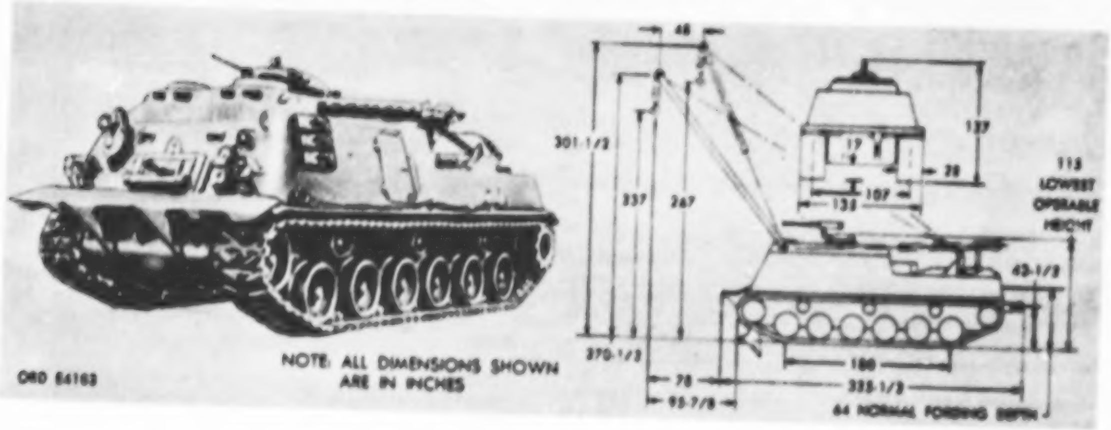
Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-281, TM 9-7402, LO 9-7402

* For characteristics and data, see item in section 27.

RECOVERY VEHICLE, FULL TRACKED: MEDIUM, M88, W/E



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NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Model	*Line item No.*	*Federal stock No.*
M88		2320-678-5772

General

RECOVERY VEHICLE, FULL TRACKED: medium, M88, w/e, is a full-track-laying armored vehicle used to perform the rescue and recovery roles for vehicles in the medium and light tank class. The vehicle is powered by a 12-cylinder, 90° V, air-cooled, fuel injection engine. Power is transmitted to the final drives through a cross-drive transmission. This vehicle can be identified by its longer and lower silhouette than that of the other vehicles in this category.

The vehicle is supported by a torsion bar suspension system similar to the new procurement vehicle.

The vehicle hull is inclosed, affording the operating crew full protection from small arms fire, mortar fire, and land mines.

Differences among models

Data plate location

Classification: Standard A (OTCM 37110)

CHARACTERISTICS

Crew	4
Length, overall	325½ in
Width, overall	135 in
Height, overall	127 in
Armament:	
CARBINE, CALIBER .30: M2	1
LAUNCHER, ROCKET: 3.5-inch, M20	1
MACHINE GUN, CALIBER .50: Browning, M2	1
SUBMACHINE GUN, CALIBER .45: M3A1	1
Tracks:	
Width	28 in
Tread (center-to-center-of-tracks)	107 in
Outside-to-outside-of-tracks	135 in
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	112,000 lb
Empty	
Length of track on ground	
Ground clearance	18 in
Ground contact area -0 inch penetration	
Ground pressure	10.5 psi
Pintle height, loaded	43½ in
Electrical system	24 volts
Number of batteries	4
Type of batteries	6TN
Fuel octane rating	83-91
Capacities:	
Fuel total	
Crankcase, refill (without cooler, cores, and lines)	445 gal
Final drive	64 qt
Brakes	multiple wet plate, foot pedal operated
Transmission:	
Manufacturer	
Model	XT 1410-2
Type	cross-drive
Final reduction	4.63:1
Engine:	
Manufacturer	Continental
Model	AVSI-1790-6A
Type	90° V, air-cooled, supercharged, fuel injection
No. of cylinders	12
Displacement	1,791 cu. in
Bore	5.746 in.
Stroke	5.780 in.
Compression ratio	5.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	980 at 2,800 rpm
Torque, gross (max w/std accessories)	1,040 ft-lb at 2,800 rpm
Type of ignition	magneto
Boom and Winch Data:	
Boom capacity:	
Spade up–4 part line	6 tons
Spade down–4 part line	25 tons
Boom maximum lift height:	
At 8 ft reach	19 ft
At 4 ft reach	25 ft
Main winch:	
Cable size	1¼ dia. 6 x 31 IWRC
Cable length	200 ft
Line pull and speed:	
Bare drum: 90,000 lb at 27 fpm, low speed; 108 fpm, high speed	
Full drum: 51,400 at 42 fpm, low speed; 170 fpm, high speed	
Hoist winch:	
Cable size	⅝ dia. 6 x 19 fibercore
Cable length	400 ft
Line pull and lifting speed:	
Bare drum: 4 part line—50,000 lb at 8½ fpm, low speed; 35 fpm high speed	
Full drum: 4 part line—30,000 lb at 16 fpm, low speed; 65 fpm high speed	

CHARACTERISTICS—Continued

Operable height and reach of boom:	
At 95⅛ in. (reach):	
Height of boom	270½ in.
Height of lifting hook	237 in.
At 78 in. (reach):	
Height of boom	301 in.
Height of lifting hook	267 in.
Lowest operable height	115 in.

AMMUNITION

Cal. .50	1,500 rd
Cal. .30	180 rd
Cal. .45	180 rd
Rockets	10

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
w/o deep-water fording kit	84 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	42 in.
Maximum width of ditch vehicle can cross	103 in.
Fuel consumption (average conditions)	0.5 mpg
Allowable speed, recommended	30 mph
Maximum drawbar pull	81,000 lb
Maximum tractive effort	152,000 lb
Cruising range (average conditions)	222 mi

EQUIPMENT

Communications:	
Radio set	AN/GRC-4 and -8 or AN/VRC-13, -14, or -15

* Sighting and Fire Control:
  BINOCULAR: (1R) M18
  PERISCOPE: M17
  PERISCOPE: M19
  PERISCOPE: M24

Basic Issue Items: See TM 9-2320-222-10P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	325½ in.
Width	135 in.
Height	127 in.
Volume	3,231 cu ft
Area	305 sq ft
Gross weight	
Ship tons	80.78

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2320-222-10, TM 9-2320-222-20 and 20P, TM 9-2320-222-35/1, LO 9-2320-222-10

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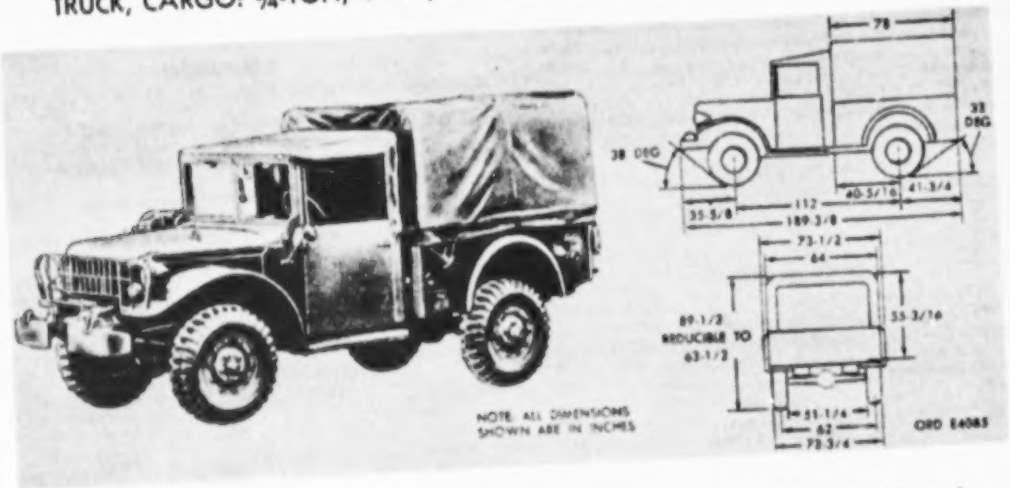
* For characteristics and data, see item in section 27.

TRUCK, CARGO: ¾-TON, 4 X 4, M37 AND M37B1, W- AND W-O WINCH



Major item

Shown: M37

Model	**Line item No.**	**Federal stock No.**
M37, w/e	4-40080-25	2320-835-8322
M37B1, w/e	4-40080-91	2320-542-4636
M37, w/wn, w/e	4-40050-25	2320-835-8323
M37B1, w/wn	4-40050-91	2320-542-4632

General

TRUCK, CARGO: ¾-ton, 4 x 4, M37 and M37B1, is a lightweight, open-top cab, four-wheel drive vehicle used to transport personnel or light general cargo. These vehicles are built on a heavy-duty chassis and may be identified by the high-wide fenders, flat hood, knock-down type wheels, and large tires.

Differences among models

The differences between models M37 and M37B1 are not visual. However, M37B1 has a greater interchangeability of parts within the supply system.

Data plate location

The vehicle identification plate is located on the instrument panel at the right of the instrument cluster.

Classification:

	Standard B (OTCM 37926)
M37	Standard A (OTCM 37926)
M37B1	No type classification
M37B1, w/e	No type classification
M37B1, w/wn	

CHARACTERISTICS

	2
Crew	
Length, overall:	189$\frac{3}{8}$ in.
W/wn	194$\frac{5}{8}$ in.
W/o wn	73½ in.
Width	
Height:	86$\frac{3}{4}$ in.
Loaded	89$\frac{1}{2}$ in.
Light	
Weight (fully equipped, less payload and personnel):	5,950 lb
W/wn	5,700 lb
W/o wn	
Payload:	1,500 lb
Cross country	2,000 lb
Highway	5.83:1
Axle gear ratio (front and rear)	

CHARACTERISTICS—Continued

Axle load:	
Empty:	
W/winch:	3,275 lb
Front	2,675 lb
Rear	
W/o winch:	3,000 lb
Front	2,700 lb
Rear	
Loaded:	
W/winch:	3,450 lb
Front	4,350 lb
Rear	
W/o winch:	3,175 lb
Front	4,375 lb
Rear	
Tires:	9.00 x 16
Size	8
Ply	40 psi
Pressure	62 in.
Tread, center-to-center, front and rear	
Electrical system:	2 (12 volt)
Number of batteries	24
Voltages	negative
Type of ground	72-80
Fuel octane rating	
Capacities:	17 qt
Cooling system w/o heater	5 qt
Crankcase (refill)	24 gal
Fuel tank	1 pt
Steering gear	3 qt
Axles	
Transmission:	10½ pt (pto) … 9 pt (w/o pto)
Through engine T245-3955	7 pt (w/pto) … 6 pt (w/o pto)
After engine T245-3955	1 qt
Winch clutch housing	1 qt
Winch worm housing	5 pt
Transfer	
Brakes:	Dodge
Manufacturer	Hydraulic
Type	
Parking brake:	External contracting
Type	
Engine:	Dodge
Manufacturer	T245
Model	4 cycle L-head
Type	(in line) 6
No. cylinders	

CHARACTERISTICS—Continued

Engine—Continued	
Displacement	230.2 cu in.
Bore	3¼ in.
Stroke	4⅝ in.
Compression ratio	6.7:1
Governed speed	3,400 rpm
Brake horsepower (w/std accessories)	78 at 2,800 rpm
Torque (w/std accessories)	175 lb-ft at 1,200 rpm
Transmission:	
Type	synchromesh
Forward speeds	4
Gear ratio:	
High	1:1
Low	6.4:1

PERFORMANCE

Computed grade ability in lowest gear	68 percent
Turning radius	25 ft
Fuel consumption	9 mpg
Cruising range	225 mi
Allowable speed (governed)	55 mph
Fording depth:	
w/fording kit	84 in.
w/o fording kit	42 in.

ADDITIONAL DATA

Live axles type, line	hypoid full-floating
Body:	
Inside dimension:	
Length	78 in.
Width	64 in.
Height	54 in.
Cargo space	160 cu ft
Winch capacity	7,500 lb
Chassis	M56

EQUIPMENT

Basic Issue Items: See TM 9-8030.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	uncrated, w/winch
Length	189¾ in.
Width	73½ in.
Height	64 in.
Area	96 sq ft
Volume	513 cu ft
Gross weight	
Ship tons	

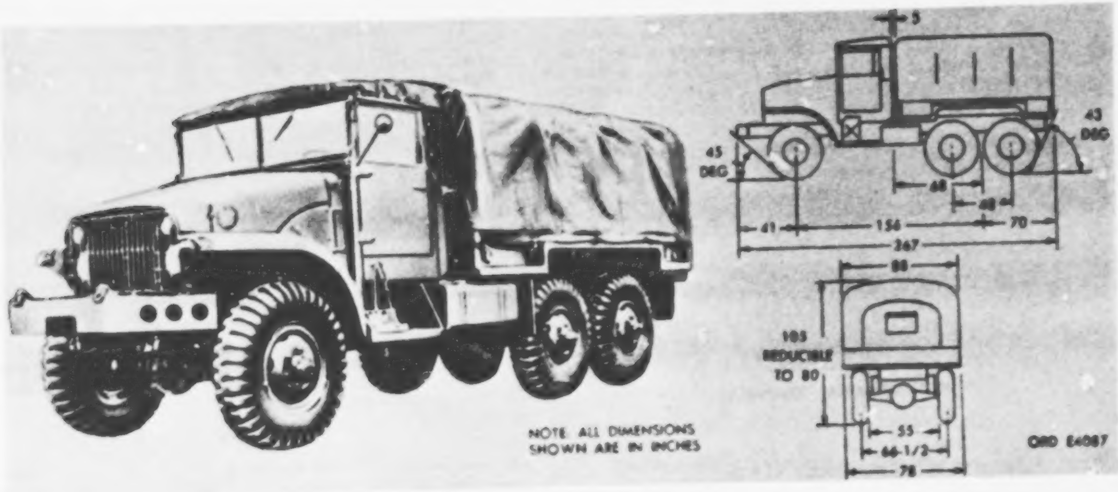
Outside Continental United States

Shipped	uncrated, w/winch
Length	
Width	
Height	
Area	97 sq ft
Volume	513 cu ft
Gross weight	
Ship tons	

References:

TM 9-8030, TM 9-1840A, TM 9-1826A, TM 9-1828A, TM 9-1825B, TM 9-2520-232-35, TM 9-2320-212-20P, LO 9-8030.

TRUCK, CARGO: 2½-TON, 6 X 6, M135, W/ AND W/O WINCH, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M135, w/o wn		2320-835-8351
M135, w/wn	4-60141-34	2320-835-8352

General

TRUCK, CARGO: M135, 2½-ton, 6 x 6, is dual-tired vehicle used to transport general cargo and personnel. The cab is canvas-covered, open-top type. The tarpaulin braces and body side boards can be removed.

Differences among models

Data plate location

The vehicle identification plate is located on the instrument panel at the right of the instrument cluster.

Classification

M135	Standard B (OTCM 36841)

CHARACTERISTICS

Crew	2
Length, overall:	
w/winch	267 in.
w/o winch	255 in.
Width	88 in.
Height as supplied for travel	80 in.
Weight:	
Net:	
w/winch	12,740 lb
w/o winch	12,330 lb
Payload	10,000 lb
Rear axle gear ratio	6.17:1
Axle load:	
Empty:	
Front	5,540 lb
Rear	3,600 lb
Loaded:	
Front	7,970 lb
Rear	7,560 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross country	35 psi
Sand	35 psi
Tread, center-to-center front	71 in.
Electrical system:	
Number of batteries	2
Volts	24
Type ground	negative
Fuel octane rating	80
Capacities:	
Cooling system w/o heater	22 qt
Crankcase refill	11 qt
Fuel tank	56 gal
Steering gear	
Axles	
Transmission	15 qt
Winch clutch housing	1¼ pt
Winch worm housing	1¼ pt
Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	General Motors
Model	302
Type	4 cycle valve in head
No. cylinders	6
Displacement	301.6 cu in.
Bore	4
Stroke	4
Compression ratio	7.2:1
Governed speed	3,400 rpm
Brake horsepower (w/std accessories)	130 at 3,200 rpm
Torque (w/std accessories)	262 lb-ft at 1,200 rpm
Transmission:	
Type	hydramatic
Forward speeds	8
High range:	
High	1:1
Third	1.55:1
Low	4.07:1

CHARACTERISTICS—Continued

Transmission—Continued	
Low range:	
High	3.82:1
Third	5.92:1
Low	15.55:1
Live axles	double reduction full-floating
Body cargo space	408 cu ft
Winch capacity	10,000 lb
Chassis	M133

PERFORMANCE

Computed grade ability in lowest gear	60 percent
Turning radius	34½ ft.
Fuel consumption	4 mpg
Cruising range	350 mi
Allowable speed (governed)	58 mph
Fording depth:	
w/fording kit	78 in.
w/o fording kit	30 in.

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

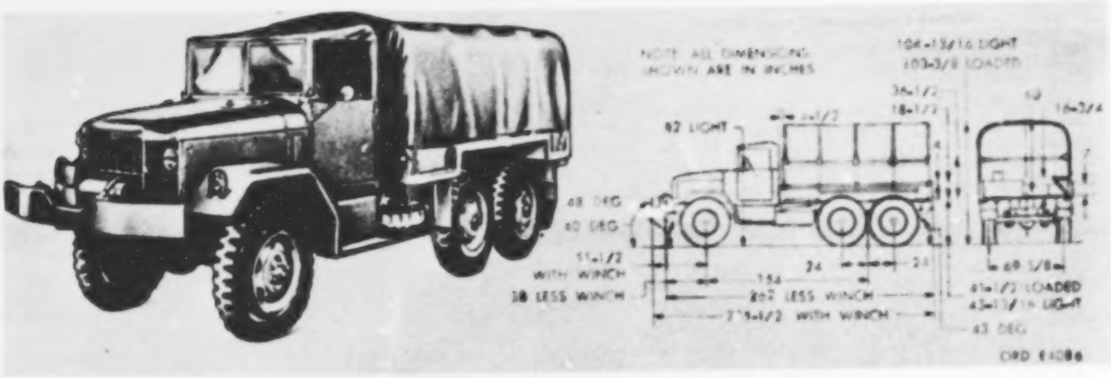
Shipped	uncrated w/winch
Length	267 in.
Width	78 in.
Height	80 in.
Area	163 sq ft
Volume	1,425 cu ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	uncrated w/winch
Length	
Width	
Height	
Area	
Volume	
Gross weight	
Ship tons	

References: TM 9–8024, SNL G–749, TM 9–2520–245–35 and 35P, TM 9–8647, TM 9–2920–210–34, TM 9–1825B, TM 9–8627, TM 9–1827A, TM 9–1827C, TM 9–8601, TM 9–1819AC, LO 9–8024.

TRUCK CARGO: 2½-TON, 6 X 6, M34, W/ AND W/O WINCH, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M34, w/o wn	4-60110-26	2320-739-7545
M34, w/wn	4-60141-28	2320-835-8536

General

TRUCK, CARGO: 2½-ton, 6 x 6 M34, is a heavy-duty carrier of personnel and general cargo. It is a six-wheel drive, single-tired vehicle with a 12-foot steel body. Cargo racks and tarpaulin racks are provided and are removable. The spare wheel is carried below the chassis.

Differences among models

Data plate location

The responsible agency data plate is located on the instrument panel to the right of the instrument cluster.

Classification: Standard B (OTCM 37119).

CHARACTERISTICS

Crew	2
Length, overall:	
w/wn	275 in
w/o wn	262 in
Width	88 in
Height (as supplied for travel)	109 in
Weight, net:	
w/wn	12,190 lb
w/o wn	11,775 lb
Payload (highway)	10,350 lb
Rear axle gear ratio	6.72:1
Axle load:	
Empty:	
Front	6,900 lb
Rear	3,145 lb
Loaded:	
Front	6,325 lb
Rear	8,007 lb
Tires:	
Ply	12
Size	11.00 x 20
Pressure:	
Highway	70 lb
Cross country	35 lb
Sand	15 lb
Tread, center-to-center, front	69⅝ in
Electrical System:	
Number batteries	2
Volts	24
Type ground	Negative
Fuel octane rating	80
Capacities:	
Cooling system w/o heater	22 qt
Crankcase (refill)	9 qt
Fuel tank	50 gal
Steering gear	1 pt
Axles	7 qt
Transmission	5¼ qt
Winch clutch housing	1 pt
Winch worm housing	1 pt
Brakes:	
Manufacturer	Timken
Type	Air-actuated hydraulic
Parking type	transfer
Engine:	
Manufacturer	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	Valve in head 4-cycle
No. cylinders	in line 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed	3,400 rpm
Brake horsepower (w/std accessories)	146 at 3,400 rpm
Torque (w/std accessories)	248 lb-ft at 1,400 rpm
Transmission:	
Type	synchromesh
Forward speed	5
Gear ratio:	
High	1:1
Low	7.55:1
Live axles, type	Spiral bevel full-floating
Body cargo space	408 cu ft
Winch capacity	7,500 lb
Chassis	M44

PERFORMANCE

Computed grade ability in lowest gear	64 percent
Turning radius	36 ft
Fuel consumption	6 mpg
Cruising range	350 mi
Allowable speed (governed)	58 mph
Fording depth:	
w/fording kit	72 in.
w/o fording kit	

EQUIPMENT

Basic Issue Items: See TM 9-8022, C5

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

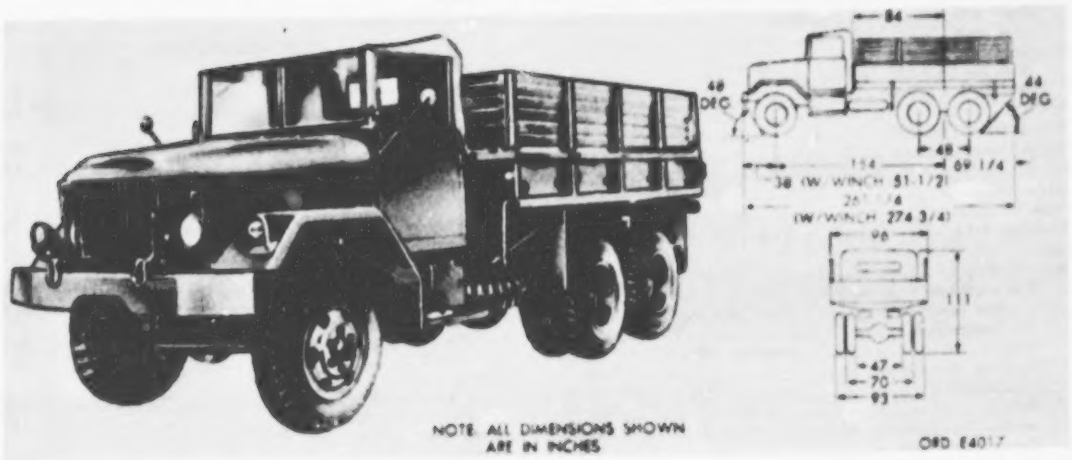
Shipped	uncrated, w/winch
Length	275½ in.
Width	88 in.
Height	109 in.
Area	169 sq ft
Volume	1150 cu ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	uncrated, w/winch
Length	
Width	
Height	
Area	
Volume	
Gross weight	
Ships tons	

References: TM 9-8022, SNL G-742, TM 9-2320-209-20P, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, LO 9-8022.

TRUCK, CARGO: 2½-TON, 6x6, M35 AND M35A1, W/ AND W/O WINCH, W/E



NOTE ALL DIMENSIONS SHOWN ARE IN INCHES

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Major Item

Model	*Line item No.*	*Federal stock No.*
M35, w/wn, soft top	4-60141-30	2320-835-8464
M35, w/o, soft top	4-60110-28	2320-835-8463
M35, w/wn, hard top	4-60141-31	2320-835-8320
M35A1, w/o wn, hard top	4-60110-27	2320-835-8319
M35A1, w/wn	4-60141-32	2320-542-5634
M35A1, w/o wn	4-60110-29	2320-542-5633

General

TRUCK, CARGO: 2½-ton, 6 x 6, M35 and M35A1, is a vehicle used to transport general cargo or personnel. The truck has troop seats for 14 passengers whom it can carry in lieu of cargo. It is dual-tired on the rear wheels. The body is a 12-foot steel flat-bed type. Sides and tarpaulin frames are removable.

Differences among models

The M35 cargo truck has a spark plug ignition engine. The M35A1 has a multifuel, compression ignition engine.

Data plate location

Classification: M35--Standard A (OTCM 36481).
M35A1- Standard A (OTCM 37671).

CHARACTERISTICS

Crew	2
Passengers	14
Length, overall:	
W/winch	276 in.
W/o winch	262 in.
Width overall	96 in.
Height (as supplied to travel)	112 in.
Weight net:	
M35:	
W/o Winch	12,465 lb
W/Winch	12,880 lb
M35A1:	
W/o Winch	13,443 lb
W/Winch	13,860 lb
Payload:	
Highway:	
M35	10,350 lb
M35A1	10,000 lb
Cross-country:	
M35	5,350 lb
M35A1	5,350 lb
Rear axle gear ratio:	
M35	6.72:1
M35A1	6.72:1
Axle load:	
Empty:	
Front:	
M35	5,810 lb
M35A1	
Rear:	
M35	8,585 lb
M35A1	
Loaded:	
Front:	
M35	6,700 lb
M35A1	
Rear:	
M35	8,840 lb
M35A1	
Tires:	
Ply	10
Size	9.00 x 20
Pressure:	
Highway:	
Front	70 psi
Rear	45 psi
Cross-country:	
Rear	35 psi
Front	45 psi
Sand	15 psi
Tread, center-to-center, front	67⅝ in.
Electrical system:	
Number of batteries (12 volts each)	2
Voltage	24
Ground	Negative
Fuel octane rating (gasoline)	80
Fuel cetane rating:	
Compression-ignition engine type	33-37
Diesel	40
Capacities:	
Cooling systems:	
M35 (w/o heater)	22 qt
M35A1	34 qt

Crankcase, refill:	
M35	9 qt
M35A1	18 qt
Steering gear	1 pt
Fuel tank	50 gal
Axle, each	7 qt
Transmission:	
W/power take-off	10½ pt
W/o power take-off	8½ pt
Transfer	7 qt
Winch clutch housing	1 qt
Winch worm housing	1½ pt
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	Air-hydraulic
Parking, type	Transfer
Engine:	
M35 truck:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	gasoline, valve-in-head 4-cycle
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed	3,600 rpm
Brake horsepower (w/std accessories)	146 @ 3,400 rpm
Torque (w/std accessories)	248 lb-ft @ 1,400 rpm
M35A1 truck:	
Manufacturer	Continental Model LDS-427-2
Type	multifuel, compression-ignition
Number of cylinders	(in line) 6
Displacement	427 cu in.
Bore	4.3125 in.
Stroke	4.875 in.
Compression ratio	20:1
Governed speed	2,600 rpm
Brake horsepower (w/std accessories	140 @ 2,600 rpm
Torque (w/std accessories)	340 lb-ft @ 1,400 rpm
Transmission:	
Manufacturer:	
M35	Spicer Mfg Co., Model 3052
M35A1	Spicer Mfg Co., Model 3053A
Type	synchromesh
Speeds.	
Forward	5
Reverse	1
Gear ratio:	
High:	
M35	1:1
M35A1	0.79:1
Low:	
M35	7.55:1
M35A1	6.02:1
Reverse:	
M35	7.36:1
M35A1	4.90:1
Transfer:	
Manufacturer:	
M35	Wisconsin Axle Div., Model T-136-10
M35A1	Rockwell-Standard, Model T-136-21
Speeds	2
Gear ratio:	
High:	
M35	1:1
M35A1	1:1
Low:	
M35	1.98:1
M35A1	1.89:1
Live axle, type	double-reduction, full-floating
Body cargo space	456 cu ft
Winch capacity	10,000 lb
Chassis	M45
Ground clearance	12.5 in.
Angle of approach:	
W/wn	38 deg
W/o wn	48 deg
Angle of departure	44 deg

PERFORMANCE

Computed grade ability in lowest gear:	
M35	64 percent
M35A1	60 percent
Turning radius:	
W/wn	35½ ft
W/o wn	34½ ft
Fuel consumption:	
M35	6 mpg
M35A1	9.3 mpg (gasoline); 9.7 mpg (CIE fuel); 11.3 mpg (diesel)
Cruising range:	
M35	350 miles
M35A1	500 miles
Allowable speed (governed):	
M35	60 mph
M35A1	58 mph
Fording depth:	
W/fording kit	72 in.
W/o fording kit	30 in.
Towed load:	
Highway	10,000 lb
Cross-country	6,000 lb

EQUIPMENT

Basic Issue Items:

M35—See TM 9-8022, C5

M35A1—See TM 9-2320-235-10

INSTRUCTIONAL MATERIAL STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 truck, uncrated	W/Winch	W/o Winch
M35:		
Length	276 in.	
Width	96 in.	
Height	112 in.	
Volume	1,718 cu ft	
Gross weight	24,064 lb	
Ship tons	42.97	
Area	259 sq ft	
M35A1:		
Length		
Width		
Height		
Volume		
Gross weight		
Ship tons		

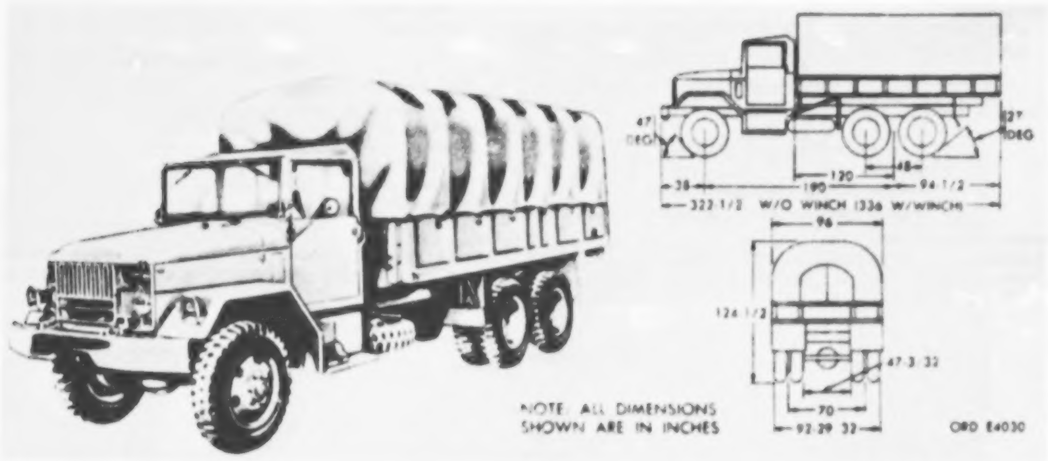
Outside Continental United States

Shipped 1 truck, uncrated	W/Winch	W/o Winch
M35:		
Height		
Volume		
Gross weight		
Ship tons		
Area		
M35A1:		
Length		
Width		
Height		
Volume		
Gross weight		
Ship tons		

References: M35—SNL G-742, TM 9-2300-223-20P, TM 9-2320-209-35P, TM 9-2320-209-20P, TM 9-8022, TM 9-1828A, TM 9-8601, TM 9-8615, TM 9-8623, TM 9-8647, TM 9-2920-210-34, LO 9-2320-209-12.

M35A1—TM 9-2320-235-10, TM 9-2320-235-20, TM 9-2320-235-20P, TM 9-2320-235-35, TM 9-2320-235-35P, TM 9-2300-223-20P, LO 9-2320-235-10.

TRUCK, CARGO: 2½-TON, 6 X 6, M36 AND M36C, W/ AND W/O WINCH, W/E



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD E4030

Major item

Model	*Line item No.*	*Federal stock No.*
M36, w/o wn	4-60230-00	2320-391-0569
M36C, w/o wn	4-60235-00	2320-200-1368
M36, w/wn	4-60231-01	2320-647-0505
M36C, w/wn	4-60265-10	2320-200-1369

General

TRUCK, CARGO: 2½-ton, 6 x 6, M36 and M36C, is used to transport general cargo and personnel. It is dual-tired on the rear wheels. The cab is canvas-covered open type. The body is a flatbed steel type, 17 feet long. Sides and tarpaulin frames are removable.

Differences among models

Data plate location

The responsible agency data plate is located on the instrument panel to the right of the instrument cluster.

Classification: Standard A (OTCM 36937)

CHARACTERISTICS

Crew	2
Length, overall:	
w/wn	336 in
w/o wn	322 in
Width	96 in
Height (as supplied for travel)	97 in
Weight, net:	
w/wn	23,915 lb
w/o wn	23,500 lb
Payload	10,000 lb
Rear axle gear ratio	6.72:1
Axle load:	
Empty:	
Front	6,085 lb
Rear	3,915 lb
Loaded:	
Front	6,625 lb
Rear	8,645 lb
Tires:	
Ply	8
Size	9.00 x 20
Pressure:	
Highway	50 psi
Cross country	
Sand	
Tread, center-to-center, front	67⅜ in
Electrical system:	
Number batteries	2
Voltage	24
Type ground	negative
Fuel octane rating	80
Capacities:	
Cooling system w/o heater	22 qt
Crankcase refill	9 qt
Steering gear	1 pt
Fuel tank	50 gal
Axles	7 qt
Transmission	5¼ qt
Winch clutch housing	1 qt
Winch worm housing	1 qt
Brakes:	
Manufacturer	Timken
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	Valve-in-head 4-cycle
No. cylinders	6
Displacement	331 cu in
Bore	4⅛ in
Stroke	4⅛ in
Compression ratio	6.73:1
Governed speed	3,400 rpm
Brake horsepower (w/std accessories)	146 at 3,400 rpm
Torque (w/std accessories)	248 lb-ft at 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Live axles, type	double reduction full-floating
Body cargo space	630 cu ft
Winch capacity	10,000 lb
Chassis	M46

PERFORMANCE

Computed grade ability in lowest gear	64 percent
Turning radius	45 ft
Fuel consumption	6 mpg
Cruising range	300 mi

PERFORMANCE—Continued

Allowable speed (governed)	58 mph
Fording depth:	
w/fording kit	72 in.
w/o fording kit	30 in.

EQUIPMENT

Basic Issue Items: See TM 9–2320–209–20P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

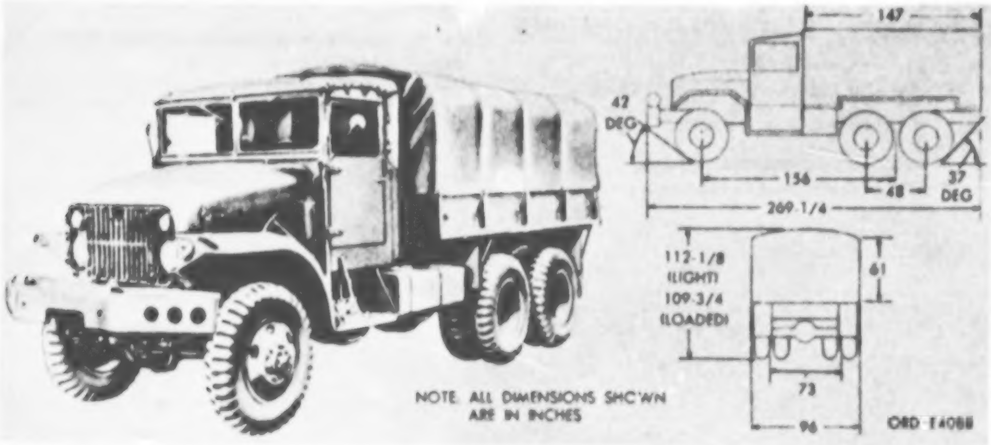
Shipped uncrated, w/wn.	
Length	
Width	
Height	
Volume	2,320 cu ft
Area	228 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped uncrated, w/wn.	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9–8022, SNL G–742, TM 9–2320–209–20P, TM 9–1828A, TM 9–8647, TM 9–2920–210–34, TM 9–8615, TM 9–8623, TM 9–8601, LO 9–8022.

TRUCK, CARGO: 2½-TON, 6 X 6, M211, W/ AND W/O WINCH, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M211,w/wn	4-60141-36	2320-834-4508
M211,w/o wn	4-60110-36	2320-834-4507

General

TRUCK, CARGO: 2½-ton, 6 x 6, M211, is used to transport general cargo and personnel. The cab is canvas-covered. The flatbed steel body has removable tarpaulin frames and removable wooden sides. The rear wheels are dual-tired.

Differences among models

Data plate location

Vehicle identification plate is located on the instrument panel.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Crew	2
Length, overall:	
W/o winch	257 in.
W/winch	269 in.
Width	96 in.
Height (as supplied for travel)	78½ in.
Weight, net:	
W/o winch	13,170 lb
W/winch	13,580 lb
Payload	10,000 lb
Rear axle gear ratio	6.17:1
Axle load:	
Empty:	
Front	5,740 lb
Rear	3,940 lb
Loaded:	
Front	6,180 lb
Rear	8,900 lb
Tires:	
Ply	8
Size	9.00 x 20
Pressure:	
Highway	
Cross country	
Sand	
Tread, center-to-center, front	69⅛ in.
Electrical system:	
Number of batteries	2
Voltage	24
Type ground	negative
Fuel octane rating	72
Capacities:	
Cooling system, w/o heater	22 qt
Crankcase, refill	11 qt
Steering gear	
Fuel tank	56 gal
Axles	8 qt
Transmission	16 qt
Winch clutch housing	1 pt
Winch worm housing	1 pt
Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	General Motors Model 302
Type	valve-in-head 4-cycle
No. cylinders	6
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed	3,400 rpm
Brake horsepower (w/std accessories)	130 at 3,400 rpm
Torque (w/std accessories)	265 lb-ft at 1,400 rpm
Transmission:	
Type	hydramatic
Forward speeds	8
High range:	
High	1:1
Third	1.55:1
Low	4.09:1
Low range:	
High	3.82:1
Third	5.95:1
Low	15.67:1
Live axles	hypoid, full-floating
Body cargo space	105 cu ft
Winch capacity	10,000 lb
Chassis	M207

PERFORMANCE

Computed grade ability in lowest gear	60 percent
Turning radius	34½ ft
Fuel consumption	5.8 mpg
Cruising range	300 mi
Allowable speed (governed)	55 mph

PERFORMANCE—Continued

Fording depth:
  W/fording kit..78 in.
  W/o fording kit..80 in.

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-749.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

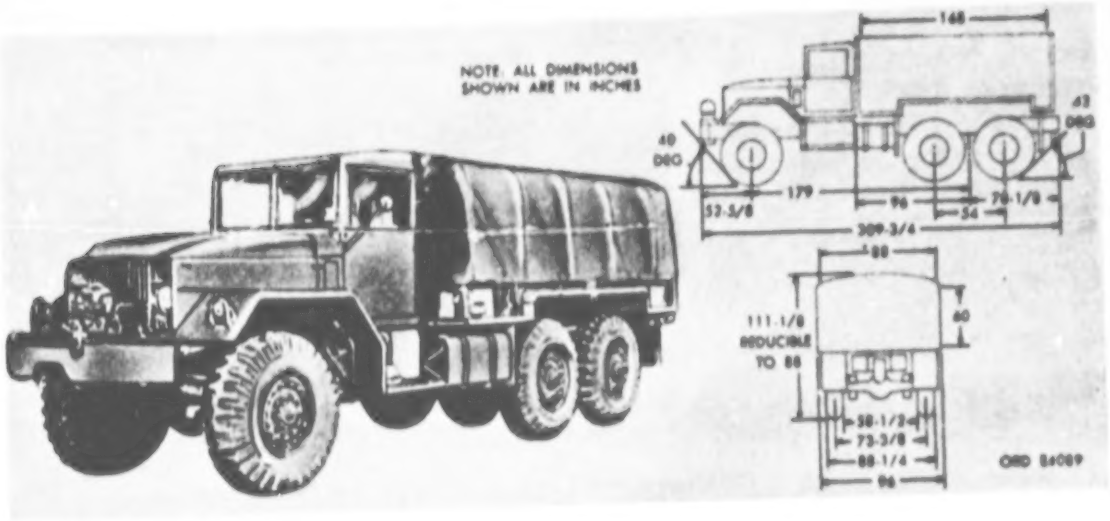
Shipped uncrated w/winch.
  Length..
  Width..
  Height..
  Volume..1,167 cu ft
  Gross weight..
  Ship tons..
  Area..180 sq ft

Outside Continental United States

Shipped uncrated w/winch.
  Length..
  Width..
  Height..
  Volume..
  Gross weight..
  Ship tons..
  Area..

References: TM 9-8024, SNL G-749, TM 9-2520-246-35 and 35P, TM 9-8647, TM 9-2920-210-34, TM 9-1825B, TM 9-8627, TM 9-1827A, TM 9-1827C, TM 9-8601, TM 9-1819AC, LO 9-8024.

TRUCK, CARGO: 5-TON, 6 X 6, M41, W/ AND W/O WINCH, W/E



ORD 84089

Major item

Model	*Line item No.*	*Federal stock No.*
M41, w/wn	4-00320-05	2320-835-8327
M41, w/o wn	4-00290-10	2320-835-8328

General
TRUCK, CARGO: 5-ton, 6 x 6 M41, is used to transport general cargo and personnel. The cab is canvas-covered. The body has removable wooden sides and tarpaulin braces. The rear wheels are single-tired.

Differences among models

Data plate location
The vehicle identification plate is located on the instrument panel.

Classification: standard B (OTCM 37119)

CHARACTERISTICS

Crew	2
Length, overall:	
w/o winch	294½ in
w/winch	309¾ in
Width	96 in
Height (as supplied for travel)	88 in.
Weight, net:	
w/o winch	34,119 lb
w/winch	34,835 lb
Payload	15,000 lb
Rear axle gear ratio	6.44:1
Axle load:	
Empty:	
Front	9,185 lb
Rear	5,325 lb
Loaded:	
Front	9,793 lb
Rear	12,696 lb
Tires:	
Ply	12
Size	14.00 x 20
Pressure:	
Highway	50 psi
Cross country	40 psi
Sand	30 psi
Tread, center-to-center, front	76⅝ in
Electrical system:	
Number batteries	2
Voltage	24
Type ground	negative
Fuel octane rating	80
Capacities:	
Cooling system, w/o heater	44 qt
Crankcase refill	22 qt
Fuel tank	78 gal
Steering gear	fill to level approximately 5¼ pt
Axles (each)	12 qt
Transmission	11 qt
Winch clutch housing	1½ qt
Winch worm housing	1½ qt
Brakes:	
Manufacturer	Timken
Type	Air-actuated hydraulic
Parking, type	transfer
Engine:	
Manufacturer, Continental	Model R6602
Type	Valve-in-head 4-cycle
No. cylinders	6
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅛ in.
Compression ratio	6.4:1
Governed speed	2,800 rpm
Brake horsepower (w/std accessories)	196 at 2,800 rpm
Torque (w/std accessories)	480 lb-ft at 1,200 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
High	1:1
Fourth	1.43:1
Low	7.31:1
Live axles	double reduction, full-floating
Body cargo space	550 cu ft
Winch capacity	20,000 lb
Chassis	M39

PERFORMANCE

Computed grade ability in lowest gear	68 percent
Turning radius	41 ft
Fuel consumption	4.44 mpg

PERFORMANCE—Continued

Cruising range	280 mi
Allowable speed (governed)	59 mph
Fording depth:	
w/fording kit	78 in.
w/o fording kit	30 in.

EQUIPMENT

Basic Issue Items: See TM 9–2320–211–20P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped uncrated, w/winch.

Length	309⅜ in..
Width	96 in.
Height	88⅞ in.
Volume	1,912 cu ft
Area	206 sq ft
Gross weight	19,700 lb
Ship tons	38.10

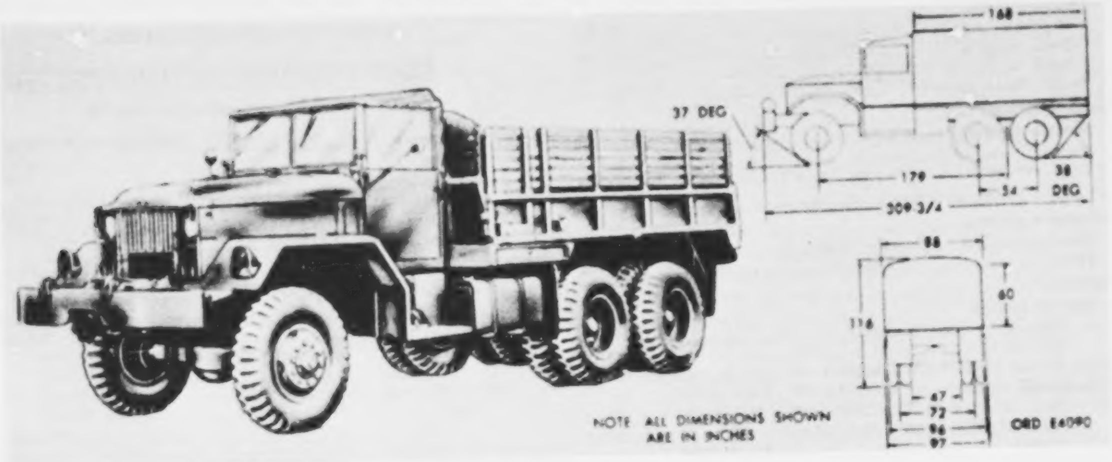
Outside Continental United States

Shipped uncrated, w/winch.

Length	
Weight	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9–8028, SNL G–744, TM 9–1837B, TM 9–1827A, TM 9–1827C, TM 9–8615, TM 9–2920–210–34, TM 9–1828A, TM 9–1825B, TM 9–8627, TM 9–8647, TM 9–2320–211–20P, LO 9–8028.

TRUCK, CARGO: 5-TON, 6X6, M54, M54A1, AND M54A2, W/ AND W/O WINCH, W/E



Major Item

Model	*Line item No.*	*Federal stock No.*
M54 w/o winch, hardtop cab	4-60290-21	2320-835-8532
M54 w/winch, hardtop cab	4-60320-11	2320-835-8531
M54 w/o winch, softtop cab	4-60290-20	2320-835-8348
M54 w/winch, softtop cab	4-60320-10	2320-835-8335
M54A1, w/o winch	4-60290-35	2320-086-7481
M54A1, w/winch	4-60320-15	2320-086-7482
M54A2, w/o winch		2320-055-9266
M54A2 w/winch		2320-055-9266

General

TRUCK, CARGO: 5-ton, 6 x 6, M54, M54A1 and M54A2, is a dual-tired, flatbed, general purpose vehicle used to transport general cargo or personnel. It has either a hard top cab or a soft top cab.

Differences among models

The M54 cargo truck has a spark ignition engine. M54A1 has a diesel compression-ignition engine and the M54A2 has a multifuel compression-ignition engine.

Data plate location

The vehicle identification plate is located on the instrument panel.

Classification: M54, w/ and w/o winch ---------- Standard B (OTCM 38093)
M54A1 ---------- Standard B (AMCTCM 1120)
M54A2 ---------- Standard A (AMCTCM 1120)

CHARACTERISTICS

Crew ---------- 2
Length, overall:
w/o winch ---------- $298\frac{3}{8}$ in.
w/winch ---------- $314\frac{1}{8}$ in.
Width ---------- 97 in.
Height (as supplied for travel) ---------- 116 in.
Weight, net:
W/winch:
M54 ---------- 19,945 lb
M54A1 ---------- 20,535 lb
M54A2 ----------
W/o winch:
M54 ---------- 19,230 lb
M54A1 ---------- 19,480 lb
M54A2 ----------

Payload (less crew):
On highway ---------- 20.000 lb
Off highway ---------- 10,000 lb
Rear axle gear ratio:
M54 ---------- 6.44:1
M54A1 ---------- 6.44:1
M54A2 ----------
Axle load:
Empty:
W/winch:
Front:
M54 ---------- 8,735 lb
M54A1 ----------
M54A2 ----------
Rear (each):
M54 ---------- 5,605 lb
M54A1 ----------
M54A2 ----------
W/o winch:
Front:
M54 ----------
M54A1 ----------
M54A2 ----------
Rear (each):
M54 ----------
M54A1 ----------
M54A2 ----------
Loaded:
W/winch:
Front:
M54 ---------- 9.584 lb
M54A1 ----------
M54A2 ----------
Rear (each):
M54 ---------- 15,220 lb
M54A1 ----------
M54A2 ----------
W/o winch:
Front:
M54 ----------
M54A1 ----------
M54A2 ----------
Rear (each):
M54 ----------
M54A1 ----------
M54A2 ----------

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Tires:	
Ply	12
Size	11.00 x 20
Pressure (psi):	
Highway	70 psi
Cross country	35 psi
Sand	15 psi
Trend, center-to-center, front	73⅝ in.
Electrical system:	
Number batteries	2
Voltage	24
Type ground	negative
Fuel octane rating (gasoline)	80
Fuel cetane rating:	
Compression-ignition engine type	33 to 37
Diesel	40
Capacities:	
Cooling system:	
M54 (w/o heater)	44 qt
M54A1	44 qt
M54A2	
Crankcase, refill:	
M54 (filters dry)	22 qt
M54A1 (filters dry)	22 qt
M54A2	
Steering gear:	
M54	fill to level approximately 5¼ pt
M54A1	fill to level approximately 5¼ pt
M54A2	
Axle (each)	12 qt
Fuel tank	78 gal
Transmission:	
W/power take-off	11 qt
W/o power take-off	9 qt
Transfer	5¼ qt
Winch clutch housing	1½ qt
Winch worm housing	1½ qt
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	Air-hydraulic
Parking, type	dual grip
Engine:	
M54 truck:	
Manufacturer	Continental, Model R6602
Type	gasoline, valve-in-head, 4-cycle
Number of cylinders	6
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in.
Compression ratio	6.4:1
Governed speed	2,800 rpm
Brake horsepower (w/std accessories)	196 @ 2,800 rpm
Torque (w/std accessories)	480 lb/ft @ 1,200 rpm
M54A1 truck:	
Manufacturer	Mack ENDT-673
Type	diesel, compression-ignition
Number of cylinders	6
Displacement	672 cu in.
Bore	4.875 in.
Stroke	6 in.
Compression ratio	16.59:1
Governed speed	2,100 rpm
Brake horsepower, gross (w/std accessories)	205 @ 2,100 rpm
Torque, gross (w/std accessories)	560 lb/ft @ 1,400-1,600 rpm
Transmission:	
Manufacturer:	
M54	Spicer 6352
M54A1	Spicer 6453
M54A2	
Type	synchromesh
Speeds:	
Forward	5
Reverse	1
Gear ratio:	
High:	
M54	1:1
M54A1	0.78:1
M54A2	
Low:	
M54	7.31:1
M54A1	6.07:1
Reverse:	
M54	7.33:1
M54A1	6.09:1
M54A2	
Transfer:	
Manufacturer:	
M54	Timken
M54A1	Timken
M54A2	
Speeds	
Gear ratio (rear output shaft):	
High:	
M54	1.00:1
M54A1	1.00:1
M54A2	
Low:	
M54	2.024:1
M54A1	2.024:1
M54A2	
Live axles, type	double-reduction
Body cargo space	550 cu ft
Winch capacity:	
Front	20,000 lb
Rear	45,000 lb
Chassis	M40
Wheelbase	179 in.
Ground clearance	10½ in.
Angle of approach:	
W/winch	37 deg
W/o winch	52 deg
Angle of departure	38 deg

PERFORMANCE

Computed grade ability in lowest gear:	
M54	50.6 percent
M54A1	74.5 percent
M54A2	
Turning radius:	
W/winch	20 ft, 9⅓ in.
W/o winch	20 ft, ½ in.
Fuel consumption:	
M54	2.74 mpg
M54A1	5.4 mpg (diesel), 5.07 mpg (CIE)
M54A2	
Cruising range:	
M54	214 mi
M54A1	(approx) 400 mi
M54A2	
Allowable speed (governed):	
M54	52.6 mph
M54A1	54 mph
Fording depth:	
W/fording kit	78 in.
W/o fording kit	30 in.
Towed load:	
Highway	30,000 lb
Cross-country	15,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-2320-211-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 truck, uncrated.

	W/winch	W/o winch
M54:		
Length	310 in.	
Width	97 in.	
Height	86 in.	
Volume	2.046 cu ft	
Area	211 sq ft	
Gross weight	19.945 lb	
Ship tons	37.50	
M54A1:		
Length		
Width		
Height		
Volume		
Area		
Gross weight		
Ship tons		

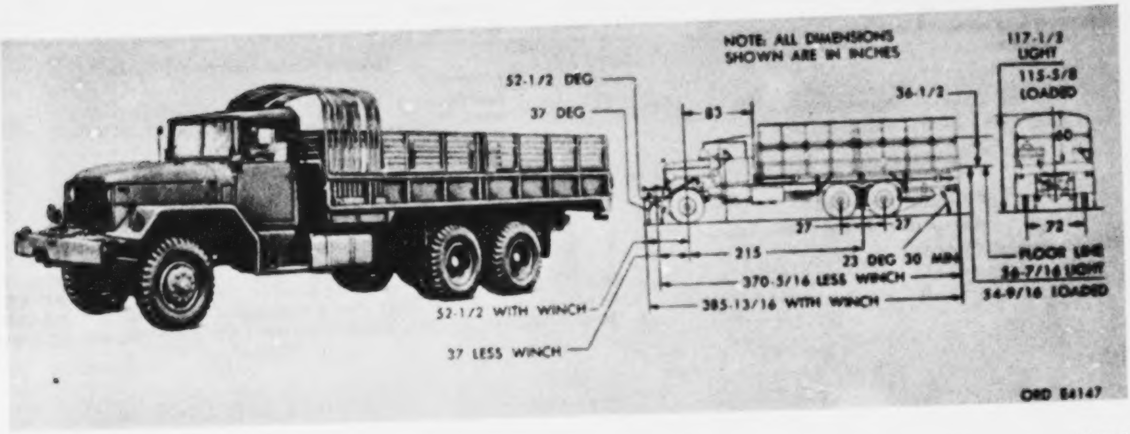
Outside Continental United States

Shipped 1 truck, uncrated.

	W/winch	W/o winch
M54:		
Length		
Width		
Height		
Volume		
Area		
Gross weight		
Ship tons		
M54A1:		
Length		
Width		
Height		
Volume		
Area		
Gross weight		
Ship tons		

References: SNL G-744, TM 9-1825B, TM 9-1827A, TM 9-1827C, TM 9-1828A, TM 9-8029-1, TM 9-8029-2, TM 9-1837A, TM 9-1827B, TM 9-8627, TM 9-8647, TM 9-2320-211-10, TM 9-2320-211-20P, TM 9-2320-211-20, LO 9-2320-211-12.

TRUCK, CARGO: 5-TON, 6 X 6, M55 W/ AND W/O WINCH


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
52-1/2 DEG
37 DEG
83
36-1/2
117-1/2 LIGHT
115-5/8 LOADED
60
72
37
37
215
23 DEG 30 MIN
FLOOR LINE
56-7/16 LIGHT
54-9/16 LOADED
370-5/16 LESS WINCH
385-13/16 WITH WINCH
52-1/2 WITH WINCH
37 LESS WINCH
ORD E4147

Major item

Model	*Line item No.*	*Federal stock No.*
M55, w/o wn	4–60410–00	2320–200–1878
M55, w/wn	4–60420–00	2320–391–0570

General

TRUCK, CARGO: 5-ton, 6 x 6, M55, is used to transport general cargo and personnel. The body construction is steel except for troop seats, lazy backs, and hardwood middle layer in floor. Sides and tarpaulin braces are removable.

Differences among models

Data plate location

The vehicle identification data plate is located on the instrument panel.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net	24,064 lb
Payload:	
Off highway	10,000 lb
On highway	20,000 lb
Gross:	
Off highway	34,414 lb
On highway	44,414 lb
Capacities:	
Fuel	78 gal
Cooling system	44 qt
Crankcase, refill	22 qt
Transmission, w/power-take-off	11 qt
Transfer	5 2 qt
Axles (each)	12 qt
Winch:	
Oil capacity	1 3 qt
Load capacity	20,000 lb
Electrical system	24 volt
Number of batteries	(12-volt) 2
Type of ground	negative
Brakes:	
Manufacturer	Timken
Type	air-hydraulic
Parking brake, type	dual grip
Engine:	
Manufacturer	Continental
Model	R-6602
Type	gasoline, valve-in-head
Number of cylinders (in line)	6
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in.
Compression ratio	6.4:1
Governed speed:	
Full load	2,800 rpm
No load	2,950 rpm
Brake horsepower (max):	
W/std accessories	196 @ 2,800 rpm
W/o std accessories	224 @ 2,800 rpm
Torque (max):	
W/std accessories	480 lb-ft @ 1,200 rpm
W/o std accessories	504 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.31:1
Transfer:	
Speeds	2
Gear ratio:	
High	1.068:1
Low	2.163:1
Axle:	
Type	double reduction
Body:	
Type	flat floor
Length	244 in.
Width	88 in.
Sides	14
Tailgate (w/stirrup type steps)	19¼ in.
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross country	50 psi
Sand	30 psi
Tread, center-to-center, front	73⅝ in.
Ground clearance	10½ in.
Pintle height, empty	28¾ in.
Loading height, empty	26⅞ in.
Fuel octane rating	80

PERFORMANCE

Computed grade ability in lowest gear, loaded	65 percent
Turning radius	46 ft
Fording depth:	
W/o kit	30 in.
W/kit	78 in.

PERFORMANCE—Continued

Fuel consumption, loaded	2.7 mpg
Cruising range, loaded	214 mi
Allowable speed, governed	52.8 mph
Maximum recommended towed load:	
Off highway	15,000 lb
On highway	30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-2320-211-20P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

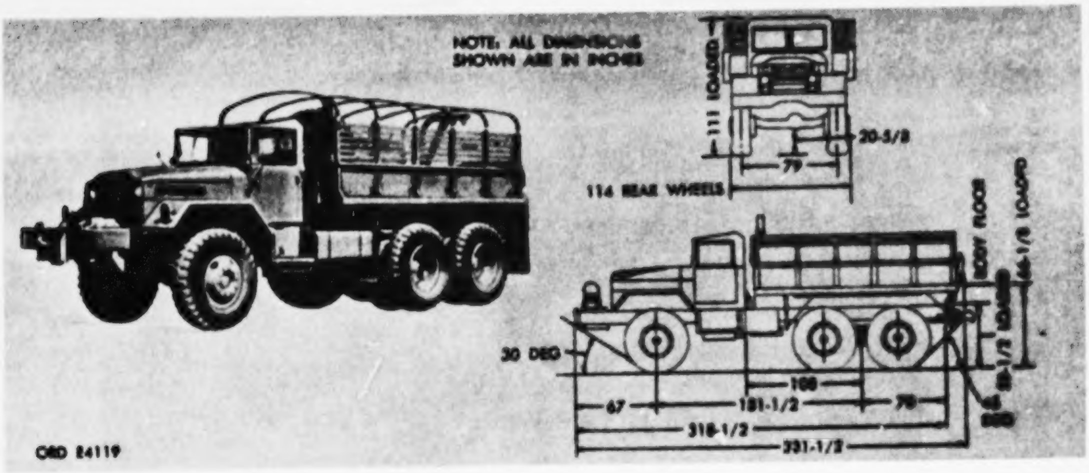
Shipped uncrated w/winch.	
Length	388 in.
Width	96 in.
Height	86 in.
Volume	2,544 cu ft
Area	259 sq ft
Gross weight	24,064 lb
Ship tons	51.40

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Gross weight	
Ship tons	

References: TM 9-8028, TM 9-8029, -1, -2, -3, SNL G-744, TM 9-1837A, TM 9-1837B, TM 9-1827A, TM 9-1827C, TM 9-8615, TM 9-2920-210-34, TM 9-1828A, TM 9-1825B, TM 9-8627, TM 9-8647, TM 9-2320-211-20P, LO 9-8028.

TRUCK, CARGO: 10-TON, 6 X 6, M125, W/WINCH, W/E



ORD 24119

Major item

Model	*Line item No.*	*Federal stock No.*
M125	4-60442-20	2320-219-7340

General

TRUCK, CARGO: 10-ton, 6 x 6, M125, is a tandem rear axle truck equipped with a 96 x 168 steel cargo body, and designed primarily to tow a 155-mm gun or an 8-inch howitzer and to transport general cargo.

Differences among Models

Data plate location

The vehicle identification plate is located on the instrument panel.

Classification: Standard B (OTCM 37320).

CHARACTERISTICS

Crew	2
Length, overall	318½ in.
Width	114 in.
Height	129¼ in.
Weight:	
Net	30,000 lb
Payload	35,000 lb
Axle load:	
Empty:	
Front	12,845 lb
Rear	18,755 lb
Loaded:	
Front	13,665 lb
Rear	25,865 lb
Rear axle gear ratio	9.02:1
Tires:	
Size	14 x 24
Ply	20
Pressure:	
Highway	50 psi
Cross country	25 psi
Sand	15 psi
Tread, center-to-center, front	79 in.
Electrical system:	
Number of batteries	2
Voltage	24 volt
Type ground	negative
Fuel octane rating	80
Capacities:	
Cooling system, w/o heater	66 qt
Crankcase, refill	22 qt
Fuel tanks (2 each)	110 gal
Steering gear	fill to level
Axles:	
Rear	32 pt
Front	12 pt
Transmission	22 pt
Transfer	20 pt
Winch clutch housing	8½ pt
Winch worm housing	8½ pt
Brakes:	
Manufacturer	Mack-Bendix-Westinghouse
Type	internal expanding
Engine:	
Manufacturer	Le Roi, Model T-H 844
Type	valve in head
Number of cylinders	V8
Displacement	844 cu in.
Bore	5¼ in.
Stroke	4⅞ in.
Compression ratio	6.7:1
Governed speed	2,600 rpm
Brake horsepower	297 @2,600 rpm
Torque	725 lb-ft @1,700 rpm
Transmission:	
Type	selective constant mesh
Forward speeds:	5
High	1:1
Low	7.5:1
Live axles	full-floating, double reduction
Body cargo space	600 cu ft
Winch capacity	45,000 lb
Chassis	M121

PERFORMANCE

Computed grade ability in lowest gear	60 percent
Turning radius	36 ft
Fuel consumption	3 mpg
Cruising range	330 mi
Allowable speed (governed)	43 mph
Fording depth:	
W/o fording kit	30 in.
W/fording kit	78 in.

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-792.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped uncrated w/winch.

Length	320 in.
Width	114 in.
Height	90 in.
Volume	1,902 cu ft
Area	252 sq ft
Gross weight	31,600 lb
Ship tons	47.55

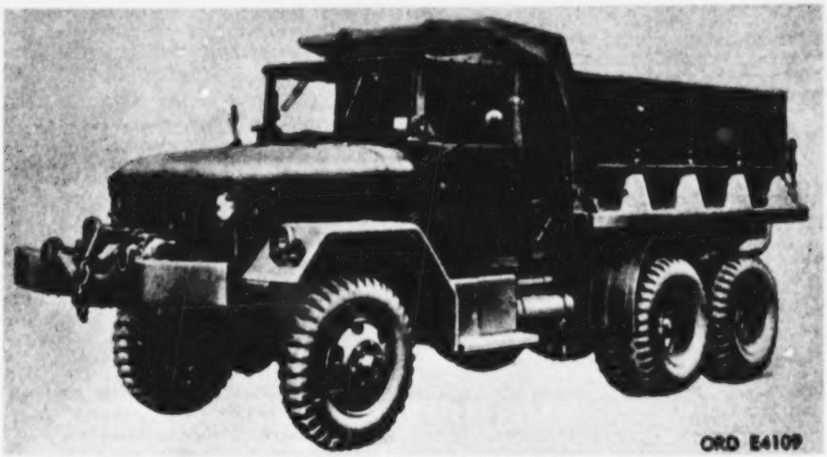
Outside Continental United States

Shipped uncrated w/winch.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2320-206-12, SNL G-792, TM 9-1837A, TM 9-1837B, TM 9-1827A, TM 9-1827C, TM 9-8615, TM 9-2920-216-34, TM 9-1828A, TM 9-1825B, TM 9-8627, TM 9-8147, TM 9-2320-206-12, LO 9-2320-206-10.

TRUCK, CARGO DUMP: 2½-TON, 6 X 6, M342, W/ AND W/O WINCH, W/E


ORD E4109

Major item

Model	*Line item No.*	*Federal stock No.*
M342, w/wn.	4-60710-65	2320-343-8803
M342, w/o wn	4-60680-18	2320-542-4842

General

TRUCK, CARGO DUMP: 2½-ton, 6 x 6, M342, is used to transport and dump earth, sand, gravel, coal, etc. It can also be used to transport general cargo and personnel. Body includes hinged cab protector, combination side racks and troop seats.

Differences among models

Data plate location

The identification plate is located on the instrument panel.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	15,165 lb
W/winch	15,580 lb
Payload:	
Off highway	5,000 lb
On highway	10,000 lb
Axle load:	
Empty:	
W/o winch:	
Front	5,705 lb
Rear	9,460 lb
W/winch:	
Front	6,200 lb
Rear	9,380 lb
Loaded:	
On highway:	
W/o winch	20,165 lb
W/winch	20,580 lb
Off highway:	
W/o winch	25,165 lb
W/winch	25,580 lb
Ground clearance	10¹¹⁄₁₆ in.
Capacities:	
Fuel	50 gal
Cooling system	22 qt
Crankcase, refill (dry)	10½ qt
Transmission	8½ pt
Transfer	14 pt
Axles:	
Front	14 pt
Rear (each)	14 pt
Winch oil capacity (each end)	1 qt
Winch load capacity	10,000 lb
Electrical system:	
Potential	24 volts
Number of batteries	2
Type of batteries	(12 volt) 6TN
Fuel octane rating	72-80
Brakes:	
Manufacturer	Timken, Detroit
Type, internal drum size	15 dia x 3 w
Parking, type; internal-external drum size	14 dia x 3 w
Actuation	air-over-hydraulic
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	gasoline, valve-in-head
Number of cylinders	6
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.73:1
Governed speed	3,400 rpm
Brake horsepower (max w/std accessories)	146 @ 3,400 rpm
Torque (max w/std accessories)	270 lb-ft @ 1,400 rpm
Transmission:	
Manufacturer	Spicer, Model 3052
Type	synchromesh
Speeds:	
Forward	5
Reverse	1
Gear ratio	7.55:1; 4.18:1; 2.45:1; 1.45:1 direct; 7.36:1 reverse
Transfer:	
Manufacturer	Timken, Detroit, Model T-136
Number of speeds	2
Gear ratio	high 1:1; low 1.98:1
Dump body:	
Capacity	2½ cu yd
Sides	12⅝ in.
Dumping angle	70°
Length	11 ft
Width (inside)	70 in.
Tailgate	20 in.

CHARACTERISTICS—Continued

Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand, mud, snow	15 psi
Tread, center-to-center, front	67¾ in.

PERFORMANCE

Computed grade ability lowest gear	64 percent
Turning radius	36 ft
Fuel consumption	6 mpg
Cruising range	350 mi
Allowable speed (governed)	58 mph
Fording depth:	
W/o fording kit	40 in.
W/fording kit	72 in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

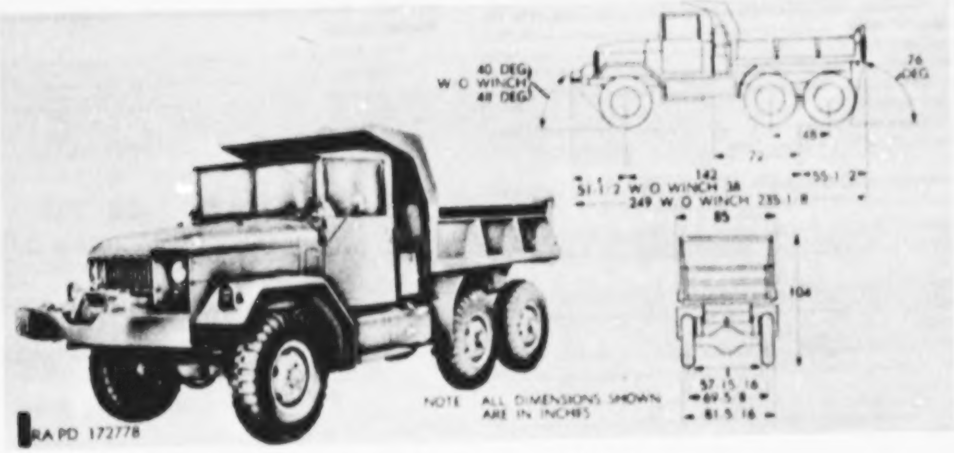
Shipped	
Length	
Width	
Height	w/wn, 1,573 cu ft
Volume	w/o wn, 1,487 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, SNL G-742, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, TM 9-2320-209-20P.

TRUCK, DUMP: 2½-TON, 6x6, M47, W/ AND W/O WINCH



RA PD 172778

Model	*Line item No.*	*Federal stock No.*
M47, w/winch	4-60710-25	2320-835-8340
M47, w/o winch	4-60680-25	2320-835-8339

General

TRUCK, DUMP: 2½-ton, 6x6, M47, w/ and w/o winch, is a vehicle used to haul and dump earth, sand, gravel, coal, etc. It can also be used to transport general cargo.

Differences among models

Data plate location

The identification (name) plate is located on the right-hand side of the instrument panel.

Classification: Limited standard (AMCTC 136).

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	13,450 lb
W/winch	13,860 lb
Payload:	
Off highway	5,350 lb
On highway	10,350 lb
Gross:	
W/o winch:	
Off highway	18,800 lb
On highway	23,800 lb
W/winch:	
Off highway	19,210 lb
On highway	24,210 lb
Length overall:	
W/o winch	236 in.
W/winch	249 in.
Width overall	85 in.
Height overall	102½ in.
Height (minimum reducible)	82 in.
Axle gear ratio	6.72:1
Axle load:	
Empty:	
W/o winch:	
Front	5,580 lb
Rear	7,870 lb
W/winch:	
Front	6,110 lb
Rear	7,750 lb
Loaded:	
W/o winch:	
Front	
Bogie	
W/winch:	
Front	
Bogie	
Ground clearance	13⅞ in.
Angle of approach:	
W/o winch	48 deg
W/winch	40 deg
Angle of departure	76 deg
Body inside dimensions:	
Length	11 ft
Width	70 in.
Height	12⅝ in.
Truck capacity	2½ cu yd
Fuel octane rating	72 to 80
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase refill	9 qt
Differential (each)	7 qt
Transmission:	
W/o power take-off	8½ pt
W/power take-off	10½ pt
Transfer	7 qt
Transfer power take-off (initial chassis run-in)	½ pt
Winch	2½ pt
Hydraulic hoist	5 gal
Electrical system:	
Voltage	24 volt
Number of batteries (12 volts each)	2
Ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air/hydraulic
Parking, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental Motor Corp	Model COA-331
Type	gasoline, valve-in-head

Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.78:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum w/std accessories	146 @ 3,400 rpm
Maximum w/o std accessories	165 @ 3,100 rpm
Torque:	
Maximum w/std accessories	248 lb-ft @ 1,400 rpm
Maximum w/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Speeds:	
Forward	5
Reverse	1
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.96:1
Tires:	
Number	6
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross-country	35 psi
Sand	15 psi
Tread, center to center, front	69⅝ in.

PERFORMANCE

Computed grade ability in lowest gear w/off highway load	65 percent
Turning radius:	
W/o winch	32½ ft
W/winch	33½ ft
Fuel consumption	6 mpg
Cruising range	300 mi
Allowable speed	58 mph
Fording depth:	
W/o fording kit	30 in.
W/fording kit	72 in.
Winch capacity	10,000 lb
Towed load:	
Highway	10,000 lb
Cross-country	6,000 lb

EQUIPMENT

Basic Issue Items. See TM 9-8022

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 truck, uncrated.

Length	
Width	
Height	
Volume	1,840 cu ft
Area	198 sq ft
Gross weight	
Ship tons	

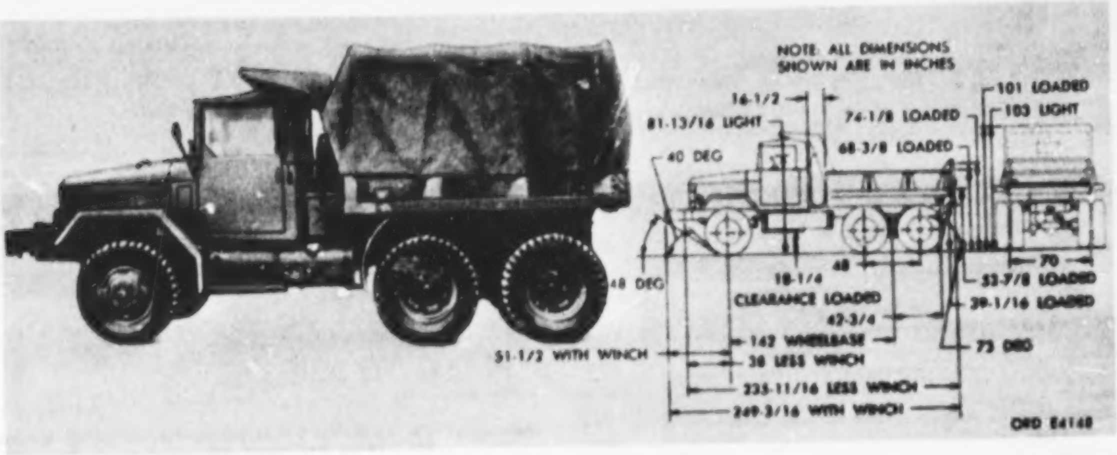
Outside Continental United States

Shipped 1 truck, uncrated.

Length	
Width	
Height	
Volume	1,840 cu ft
Area	198 sq ft
Gross weight	
Ship tons	

References: SNL G-742, LO 9-2320-209-12, TM 9-8022, TM 9-2320-209-20P, TM 9-2320-209-35P, TM 9-2300-228-20P.

TRUCK, DUMP: 2½-TON, 6 X 6, M59, W/ AND W/O WINCH, W/E


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
16-1/2
81-13/16 LIGHT
40 DEG
74-1/8 LOADED
68-3/8 LOADED
101 LOADED
103 LIGHT
48 DEG
18-1/4 CLEARANCE LOADED
48
70
53-7/8 LOADED
39-1/16 LOADED
42-3/4
142 WHEELBASE
73 DEG
51-1/2 WITH WINCH
38 LESS WINCH
235-11/16 LESS WINCH
249-3/16 WITH WINCH
ORD E4148

Major item

Model	*Line item No.*	*Federal stock No.*
M59 w/wn	4-60710-52	2320-835-8597
M59 w/o wn	4-60680-22	2320-835-8595

General

TRUCK, DUMP: 2½-ton, 6 x 6, M59, is used to transport and dump earth, sand, gravel, coal, etc. It can also be used to transport general cargo.

Differences among models

•

Data plate location

The vehicle identification plate is located on the instrument panel.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	14,050 lb
W/winch	14,460 lb
Payload:	
Off highway	5,000 lb
On highway	10,000 lb
Gross:	
W/o winch:	
Off highway	17,188 lb
On highway	22,438 lb
W/winch:	
Off highway	17,598 lb
On highway	22,848 lb
Axle gear ratio	6.722:1
Axle load:	
Empty:	
W/o winch:	
Front	5,420 lb
Rear	8,630 lb
W/winch:	
Front	5,950 lb
Rear	8,510 lb
Loaded:	
W/o winch:	
Front	5,680 lb
Bogie	13,710 lb
W/winch:	
Front	6,220 lb
Bogie	13,590 lb
Ground clearance	12¾ in
Pintle height, empty	34⅝ in
Body inside dimensions:	
Length	108 in
Width	70 in
Height	15½ in
Truck capacity	2½ cu yd
Fuel octane rating	72 to 80
Capacities:	
Fuel	50 gal.
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission and transfer:	
W/o power-take-off	4¼
W/power-take-off	5¼
Transfer	7 qt
Axles (each)	7 qt
Winch:	
Oil capacity	1 qt
Load capacity	10,000 lb
Electrical system:	24 volts
Number of batteries	(12 volt) 2
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air/hydraulic
Parking, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	gasoline, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Engine:	
Brake horsepower:	
Maximum w/std accessories	127@3,400 rpm
Maximum w/o std accessories	146@3,400 rpm
Torque:	
Maximum w/std accessories	248 lb-ft@1,400 rpm
Maximum w/o std accessories	270 lb-ft@1,400 rpm

CHARACTERISTICS—Continued

Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.98:1
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center-to-center, front	67⅝ in.

PERFORMANCE

Computed grade ability lowest gear	63 percent
Turning radius	35 ft
Fuel consumption	6 mpg
Cruising range	300 mi
Allowable speed (governed)	62 mph
Fording depth:	
W/o kit	30 in.
W/kit	72 in.

EQUIPMENT

Basic Issue Items: See TM 9-2320-209-20P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

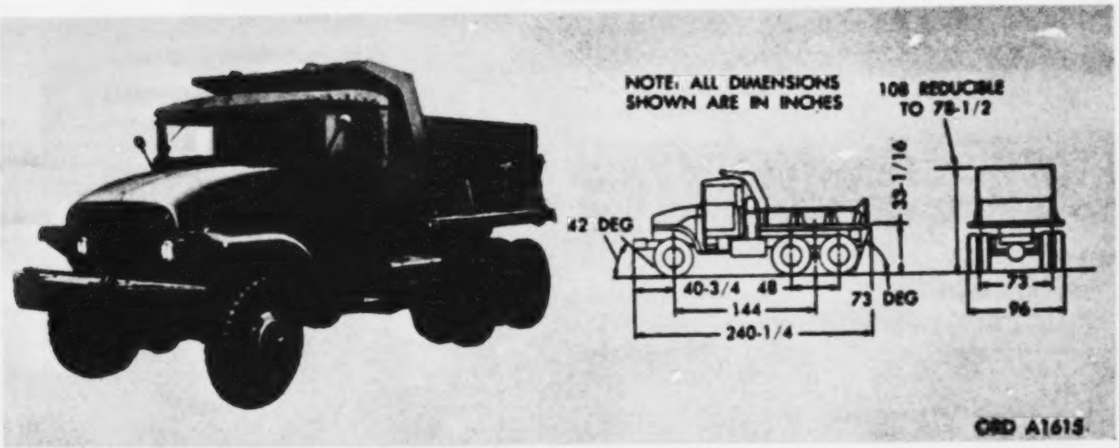
Shipped	uncrated w/winch.
Length	
Width	
Height	
Volume	1,267 cu ft
Area	160 cu ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-8023, SNL G-742, TM 9-2320-209-20P, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, LO 9-8022.

TRUCK, DUMP: 2½-TON, 6 X 6, M215, W/ AND W/O WINCH



ORD A1615

Major item

Model	*Line item No.*	*Federal stock No.*
M215, w/e	4-60710-54	2320-834-4510

General

TRUCK, DUMP: 2½-ton, 6 x 6, M215, w/ and w/o winch, is a general purpose vehicle used to haul and dump earth, sand, gravel, coal, etc., and to transport general cargo.

The vehicle has a six cylinder, in line, valve-in-head engine, a hydramatic transmission and a single speed transfer. The transfer has an opening on the left side for mounting a power-take-off and accessory drive which operates the dump body hoist, and winch on vehicles so equipped. This vehicle has a soft-top cab.

Differences among models

Data plate location

The data plate is located on the instrument panel in driver's cab.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Crew	2
Length (overall)	240¼ in.
Width (overall)	96 in.
Height (overall)	108 in.
Height reducible to	78½ in.
Height (ground to floor)	33¹⁄₁₆ in.
Length, front wheel spindle to center of rear spring seat	144 in.
Length, center to center of rear axle shafts	48 in.
Front of vehicle to center of front wheel spindle	40¾ in.
Ground clearance	12 in.
Capacities:	
Fuel	56 gal
Cooling system	22 qt
Crankcase, refill	8¾ qt
Transmission	15 qt
Transfer, w/o power-take-off	6½ pt
Axle:	
Front	15½ pt
Intermediate	13½ pt
Rear	11½ pt
Dump hydraulic hoist	5½ gal
Winch	
Oil capacity	1 qt
Load capacity	10,000 lb
Electrical system:	24 volts
Number of batteries	2 (12 volts)
Type of ground	negative

Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer: General Motors	Model 302
Type, gasoline, valve-in-head	No. of cylinders (in line) 6
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Max w/std accessories	130@3,400 rpm
Max w/o std accessories	145@3,400 rpm
Torque:	
Max w/std accessories	480 lb-ft@1,200 rpm
Max w/o std accessories	504 lb-ft@1,400 rpm
Transmission:	
Type	Model 303M hydramatic
Forward speeds	8
Gear ratio:	
High range	High 1.1; Low 4.076:1
Low range	High 3.82:1; Low 15:67:1
Transfer:	
Speeds	1
Gear ratio	1.16:1
Body inside dimensions:	
Length	108 in.
Width	70 in.
Height	15½ in.
Truck capacity	2½ cu ft
Tires:	
Size	9 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	69½ in.
Fuel octane rating	80
Axles:	
Type	hypoid, full floating
Gear ratio	6.166:1

CHARACTERISTICS—Continued

Axles—Continued

Weight capacity:	
Empty:	
W/o winch:	
Front	5,560 lb
Bogie	9,140 lb
W/winch:	
Front	5,790 lb
Bogie	12,940 lb
Loaded:	
W/o winch:	
Front	5,560 lb
Bogie	13,000 lb
W/winch:	
Front	5,790 lb
Bogie	12,940 lb
Weight:	
Net:	
W/o winch	14,460 lb
W/winch	14,870 lb
Payload:	
Off highway	3,750 lb
On highway	9,000 lb
Gross:	
W/o winch, off highway	18,210 lb
W/winch, off highway	18,620 lb
W/o winch, on highway	23,460 lb
W/winch, on highway	23,870 lb

PERFORMANCE

Computed grade ability in lowest gear, loaded	66 percent
Turning radius	32½ ft
Fording depth:	
W/o kit	30 in.
W/kit	80 in.
Fuel consumption, loaded	5.4 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	55 mph

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-749.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

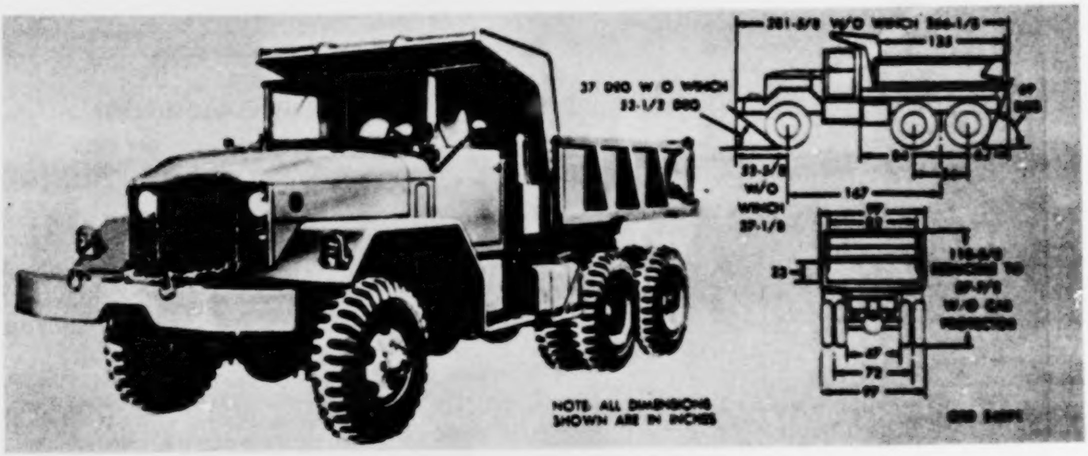
Shipped:	
Length	240⅛ in.
Width	
Height	
Volume	1,050 cu ft
Area	100 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume uncrated:	
W/winch	1,391 cu ft
W/o winch	1,318 cu ft
Area:	
W/winch	190 sq ft
W/o winch	179 sq ft
Gross weight	
Ship tons	

References: SNL G-749, TM 9-8024, TM 9-8025-1, TM 9-8025-2, TM 9-2520-245-35 and 35P, TM 9-8647, TM 9-2920-210-34, TM 9-1825B, TM 9-8627, TM 9-1827A, TM 9-1827C, TM 9-8601, TM 9-1918AC, LO 9-8024.

TRUCK, DUMP: 5-TON, 6 X 6, M51, W/ AND W/O WINCH


281-5/8 W/O WINCH 266-1/8
125
W/O WINCH
37-1/8
167
54
97
23
47
72
97
NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Model	*Line item No.*	*Federal stock No.*
M51, w/o	4-60740-20	2320-835-8336
M51, w/wn	4-60770-20	2320-835-8337

General

TRUCK, DUMP: 5-ton, 6 x 6, M51, w/ and w/o winch, is used to haul and dump earth, sand, gravel, etc., and to transport general cargo. This vehicle has a Continental Model R-6602 6-cylinder valve-in-head engine, a Spicer Model 6352 synchromesh transmission, a Timken Model T-138 2-speed transfer, and a Spicer Model WND-6N power-take-off. The power-take-off is mounted on the transmission for powering the front winch and the dump-body hydraulic-hoist-dump, it has two output shafts, one on the front, the other on the rear.

Differences among models

Data plate location

The data plate is located on the instrument panel in the driver's cab.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Crew	2
Length, overall	281⅝ in.
Length w/o winch	266⅛ in.
Width overall	97 in.
Height (max)	110⅝ in.
Height w/o cab protector	87⅞ in.
Front of vehicle w/winch to center of front wheel spindle	52⅝ in.
Front of vehicle w/o winch to center of front wheel spindle	37⅛ in.
Length, front wheel spindle to center of rear spring seat	167 in.
Length, center to center of dual wheels	54 in.
Length of dump body	146 in.
Capacities:	
Fuel	110 gal
Cooling system	44 qt
Crankcase, refill	22 qt
Transmission, w/power-take-off	11 qt
Transfer	5¼ qt
Axles (each)	12 qt
Electrical system:	24 volts
Number of batteries	2 (12 volts)
Type of ground	negative
Brakes:	
Manufacturer	Timken
Type	air actuated hydraulic
Parking, type	transfer
Engine:	
Manufacturer: Continental Motors	Model R-6602
Type	valve-in-head, 4-cycle
Number of cylinders	(in line) 6
Displacement	602 cu in.
Bore	4⅝ in.
Stroke	5⅜ in.
Compression ratio	6.4:1
Governed speed	2,800 rpm
Brake horsepower (max/std accessories)	196 @ 2,800 rpm
Torque (max/std accessories)	480 lb-ft @ 1,200 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio	High 1:1; Fourth 1.43:1; Low 7.31:1
Transfer:	
Speeds	2
Gear ratio	High 1:1; Low 2.02:1
Body inside dimensions:	
Width	82 in.
Length	125 in.
Height	23 in.
Truck capacity	5 cu yd
Tires:	
Size	11 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross country	50 psi
Sand	30 psi
Tread, center-to-center, front	73⅝ in.
Fuel octane rating	80
Axles:	
Gear ratio	6.44:1
Type	double reduction full floating
Weight capacity:	
Empty:	
W/o winch:	
Front	8,459
Rear (ea)	6,761
W/winch:	
Front	9,304
Rear (ea)	6,680

CHARACTERISTICS—Continued

Axles—Continued

Loaded:	
W/o winch:	
Off highway:	
Front	8,867
Rear (ea)	11,732
On highway:	
Front	9,067
Rear (ea)	16,632
W/winch:	
Off highway:	
Front	9,712
Rear (ea)	11,651
On highway:	
Front	9,912
Rear (ea)	16,551
Weight:	
Net:	
W/o winch	21,981 lb
W/winch	22,664 lb
Payload:	
Off highway	10,000 lb
On highway	20,000 lb
Gross:	
W/o winch on highway	41,981 lb
W/winch on highway	42,664 lb
W/o winch off highway	31,981 lb
W/winch off highway	32,664 lb

PERFORMANCE

Computed grade ability in lowest gear, loaded	70 percent
Turning radius	39¼ ft
Fording depth:	
W/o kit	30 in.
W/kit	78 in.
Fuel consumption, loaded	4.4 mpg
Cruising range, loaded	488 mi
Allowable speed, governed	52 mph
Maximum recommended towed load:	
Off highway	(gross) 15,000 lb
On highway	(gross) 30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–8028.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

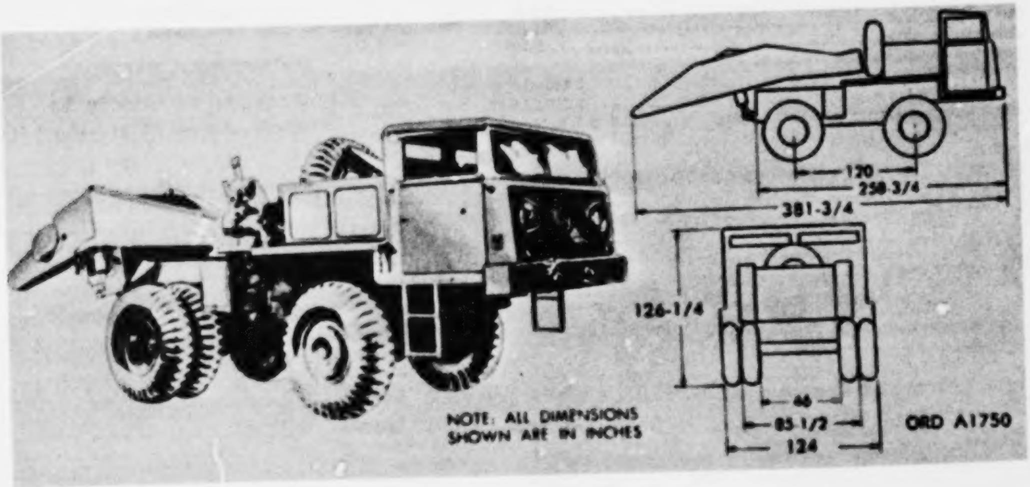
Shipped, w/winch.	
Length	281⅝ in.
Width	97¼ in.
Height	87⅞ in
Volume	1,391 cu ft
Area	190 sq ft
Gross weight	22,700 lb
Ship tons	34 77

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	cu ft
Area	sq ft
Gross weight	
Ship tons	

References: SNL G–744, TM 9–8028, TM 9–1837A, TM 9–1837B, TM 9–1827A, TM 9–1827C, TM 9–8615, TM 9–1828A, TM 9–2920–210–34, TM 9–1825B, TM 9–8627, TM 9–8647, TM 9–2320–211–20P, LO 9–8028.

TRUCK, GUN-LIFTING: HEAVY, 4 X 4, FRONT, M249



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD A1750

	Major item	
Model	*Line item No.*	*Federal stock No.*
M249, W/e	4-60960-00	2320-835-8623

General

TRUCK, GUN-LIFTING: heavy, 4 x 4, front, M249, is used with TRUCK, GUN-LIFTING: heavy, 4 x 4, rear, M250* to lift and transport the 280-mm gun M65 and 280-mm gun carriage M30 (T72). This vehicle is equipped with hydraulic lifting forks to raise and lower the gun carriage. An interphone system provides a means for drivers of front and rear trucks to communicate when both vehicles are used in transporting the gun and carriage.

Differences among models

M249 truck has cab installed at front of vehicle with engine installed behind cab over front wheels. M250 truck has cab installed over rear dual wheels of vehicle with engine installed behind cab.

M249 truck lifting fork is supported on a circular upper and lower mounting plate type fifth wheel, extending over the rear of the vehicle. M250 truck lifting fork is supported on a cylindrical outer fifth wheel which rotates around the vertical axis of the inner fifth wheel. Lifting fork extends over the front of the vehicle.

M249 truck is equipped with a spare tire and a hydraulic power winch. Tire is raised and lowered from vehicle with a manual ratchet type winch.

Transfer assembly on M249 truck is an integral part of the engine assembly. M250 truck transfer assembly is a separate unit connected to engine and vehicle power train with propeller shafts (2).

Data plate location

The data plate is located on the left side of the driver's seat base.

Classification: Standard B (OTCM 37119)

CHARACTERISTICS

Crew	4
Weight:	
Net, w/o gun and carriage	37,950 lb
Gross, w/portion of gun and carriage carried by truck	91,625 lb
Length, overall	381¾ in.
Width, overall	124 in.
Height, overall, w/spare tire, w/o gun and carriage	126¼ in.
Ground clearance	14 in.
Clear lanes:	
For 90° turn	29 ft
For U turn	75½ ft
Pintle height:	
Front	52½ in.
Rear	55 in.
Length, center to center of axles	120 in.
Tires:	
Size	16 x 25
Ply	24-ply rating
Pressure:	
Highway	70 psi
Cross country	70 psi
Sand	70 psi
Axle gear ratio:	
Front	10.87:1
Rear	10.16:1
Axle load:	
W/o gun and carriage:	
Front	15,575 lb
Rear	22,375 lb
W/gun and carriage:	
Front	29,775 lb
Rear	61,850 lb
Capacities:	
Fuel	140 gal
Crankcase, refill	11 gal
Transmission	14 gal
Differential:	
Front	5 gal
Rear	5 gal
Winch:	
Oil capacity	10 qt
Steering reservoir	4 gal
Steering gear housing	6 qt
Hoist and winch hydraulic reservoir	18 gal
Electrical system	24 volts
Number of batteries	2 (12 volt)
Type ground	negative
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	air
Parking, type	mechanical, drum
Engine:	
Manufacturer: Continental	Model AO-895-4, spec-3
Type	overhead valve, 4-cycle, air-cooled
Number of cylinders (opposed)	6
Fuel octane rating (gasoline)	80

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* For characteristics and data, see item on page 21-79.

CHARACTERISTICS—Continued

Engine—Continued

Displacement	895 cu in.
Bore	5¾ in.
Stroke	5¾ in.
Compression ratio	6.5:1
Governed speed (max):	
No load	2,950 rpm
Full load	2,840 rpm
Brake horsepower (max w/std accessories)	375 @ 2,800 rpm
Torque (max)	785 lb-ft @ 2,200 rpm
Transmission:	
Type:	manually-controlled, full torque shifting
Forward speeds	3
Gear ratio	High 1:1; 2d 2.02:1; Low 4.40:1
Transfer:	
Gear ratio	1:1
Winch load capacity	60,000 lb

PERFORMANCE

Computed grade ability in lowest gear w/gun and carriage	30 percent
Turning radius, w/o gun and carriage	(right or left) 29 ft
Fording:	
Depth	60 in.
Speed	3–4 mph
Cruising range, w/gun and carriage:	
Highway	165 mi
Secondary road	130 mi
Cross-country	104 mi
Maximum allowable speed, governed	40 mph
Cruising speed	25 mph

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-268.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

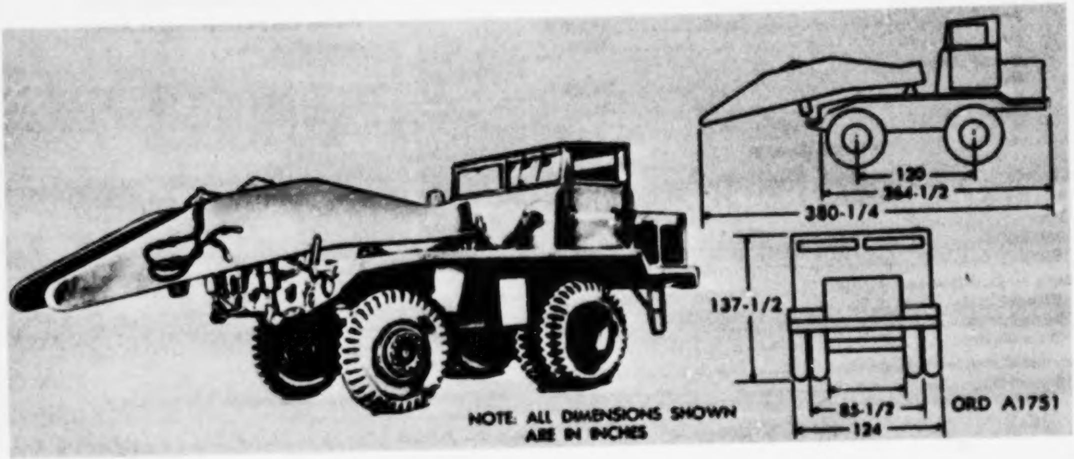
Shipped	
Length	381¾ in.
Width	124 in.
Height	126¼ in.
Volume	3,459 cu ft
Area	329 sq ft
Net weight	37,950 lb
Ship tons	86.48

Outside Continental United States

Shipped	
Length	381¾ in.
Width	124 in.
Height	126¼ in.
Volume	3,459 cu ft
Area	329 sq ft
Net weight	37,950 lb
Ship tons	86.48

References: SNL G-268, TM 9-8006, TM 9-1755BB.

TRUCK, GUN-LIFTING: HEAVY, 4 X 4 REAR, M250



Model	*Major item* *Line item No.*	*Federal stock No.*
M250, W/e	4-60970-00	2320-835-8624

General

TRUCK, GUN-LIFTING: heavy, 4 x 4, rear, M250, is used with TRUCK, GUN-LIFTING: heavy, 4 x 4, front, M249*, to lift and transport the 280-mm gun M65 and 280-mm gun carriage M30 (T72). It is equipped with hydraulic lifting forks to raise and lower the gun carriage. An interphone system provides a means for drivers of front and rear trucks to communicate when both vehicles are used in transporting the gun and carriage.

Differences among models

M249 truck has cab installed at front of vehicle with engine installed behind cab over front wheels. M250 truck has cab installed over rear dual wheels of vehicles with engine installed behind cab.

M249 truck lifting fork is supported on a circular upper and lower mounting plate type fifth wheel, extending over the rear of the vehicle. M250 truck lifting fork is supported on a cylindrical outer fifth wheel which rotates around the vertical axis of the inner fifth wheel. Lifting fork extends over the front of the vehicle.

M249 truck is equipped with a spare tire and a hydraulic power winch. Tire is raised and lowered from vehicle with a manual ratchet type winch.

Transfer assembly on M249 truck is an integral part of the engine assembly. M250 truck transfer assembly is a separate unit connected to engine and vehicle power train with propeller shafts (2).

Data plate location

The data plate is located on the left side of the driver's seat base.

Classification: Standard B (OCTM 37119).

CHARACTERISTICS

Crew	4
Weight:	
Net, w/o gun and carriage	35,910 lb
Gross, w/portion of gun and carriage carried by truck	81,240 lb
Length (overall)	380¼ in.
Width (overall)	124 in.
Height (overall), w/o gun and carriage	137½ in.
Length, center to center of axles	120 in.
Ground clearance	14½ in.
Pintle height, rear	55½ in.
Capacities	
Fuel	140 gal
Hoist hydraulic reservoir	12 gal
Steering reservoir	4 gal
Steering gear housing	6 qt
Transfer case	6 qt
Crankcase, refill	11 gal
Transmission	14 gal
Differential:	
Front	5 gal
Rear	5 gal
Electrical system:	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer: Bendix-Westinghouse	Type: air
Parking, type	mechanical, drum on rear axle
Engine:	
Manufacturer: Continental	Model AO-895-4, spec-4
Type:	Overhead valve, 4 cycle, air-cooled
No. of cylinders (opposed)	6
Fuel octane rating (gasoline)	80
Displacement	895 cu in.
Bore	5¾ in.
Stroke	5¾ in.
Compression ratio	6.5:1
Governed speed (max):	
No load	2,950 rpm
Full load	2,840 rpm
Brake horsepower (max w/std accessories)	375 @ 2,800 rpm
Torque (max)	785 lb-ft @ 2,200 rpm
Transmission:	
Type:	manually controlled, full-torque shifting
Forward speeds	3
Gear ratio	High 1:1; 2d 2.02:1; Low 4.40:1
Transfer:	
Gear ratio	1:1
Tires:	
Size	16 x 25
Ply	24-ply rating
Pressure:	
Highway	70 psi
Cross country	70 psi
Sand	70 psi

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* For characteristics and data, see item on page 21-39.

CHARACTERISTICS—Continued

Axle gear ratio:	
Front	10.87:1
Rear	10.16:1
Axle load:	
W/o gun and carriage:	
Front	16,350 lb
Rear	19,560 lb
W/gun and carriage:	
Front	24,109 lb
Rear	54,327 lb

PERFORMANCE

Computed grade ability in lowest gear w/gun and carriage	30 percent
Turning radius, w/o gun and carriage	(right or left) 40 ft
Fording:	
Depth	60 in.
Speed	3–4 mph
Cruising range, w/gun and carriage:	
Highway	165 mi
Secondary road	130 mi
Cross-country	104 mi
Maximum allowable speed, governed	40 mph
Cruising speed	25 mph

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-268.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

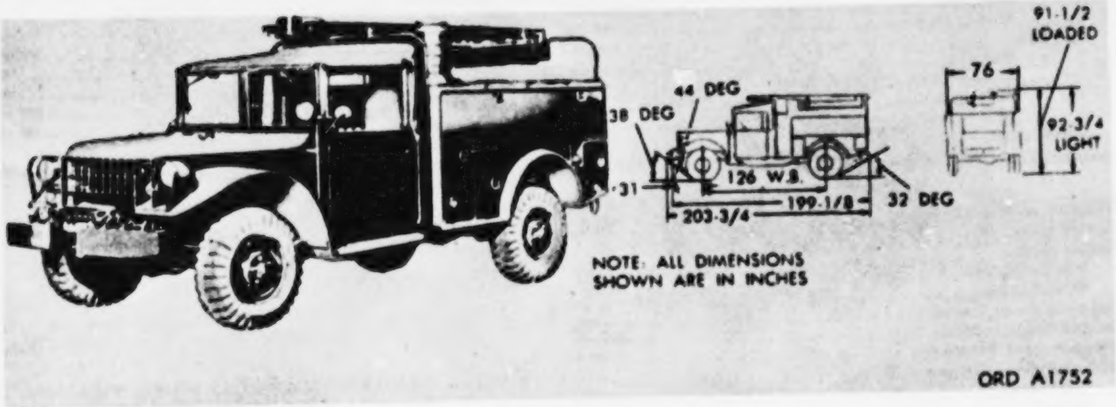
Shipped	
Length	380¼ in.
Width	124 in.
Height	137⅛ in.
Volume	3,740 cu ft
Area	328 sq ft
Gross weight	
Ship tons	93.50

Outside Continental United States

Shipped	
Length	380¼ in.
Width	124 in.
Height	137⅛ in.
Volume	3,740 cu ft
Area	328 sq ft
Gross weight	
Ship tons	93.50

References: SNL G-268, TM 9-8006, TM 9-1755BB.

TRUCK, MAINTENANCE: ¾-TON, 4 X 4, M201, AND M201B1, W/WINCH
(Signal Corps Model V41/GT)



ORD A1752

Major item

Model	*Line item No.*	*Federal stock No.*
M201, w/wn.		2320-835-8583
M201B1, w/wn.		2320-630-0801

General

TRUCK, MAINTENANCE: ¾-ton, 4 x 4, M201 and M201B1, w/winch is used for telephone maintenance. It has an all steel body with compartment for stowage of tools and supplies. It has a steel cab with soft top which is separated from the body.

Differences among models

The differences among models M201 and M201B1 are not visual. However M201B1 has a greater interchangeability of parts within the supply system.

Data plate location

The data plate is located on the dash panel.

Classification

M201—Standard B (OTCM 37926)
M201B1—Standard A(OTCM 37926).

CHARACTERISTICS

Crew	2
Weight:	
Net, w/winch	6,950 lb
Gross:	
Off highway	8,800 lb
On highway	9,300 lb
Length	203¾ in.
Width	76 in.
Height:	
Light	92¾ in.
Loaded	91½ in.
Wheel base	126 in.
Fuel octane rating	72-80
Axle gear ratio	5.83:1
Axle load:	
Empty w/winch:	
Front	3,500 lb
Rear	3,450 lb
Loaded w/winch:	
Front	3,775 lb
Rear	5,025 lb
Ground clearance	10¾ in.
Pintle height, loaded	[illegible]
Loading height	30¼ in
Capacities:	
Fuel	24 gal
Cooling system	17 qt
Crankcase, refill	5 qt
Transmission:	
Through engine T245-3955	10½ pt (w/pto) 9 pt (w/o pto)
After engine T245-3955	7 pt (w/pto) 6 pt (w/o pto)
Transfer	5 pt
Axles:	
Front	6 pt
Rear	6 pt
Winch oil capacity:	
Clutch hsg	1 qt
Worm hsg	1 qt
Winch load capacity	7,500 lb
Electrical system:	24 volt
Number of batteries	2 (12 volt)
Type of batteries	U.S. 2HN
Brakes:	
Manufacturer	Thermoid
Type	tapered woven and molded
Parking, type	woven asbestos
Service	Molded, ground concentrically
Engine:	
Manufacturer	Dodge, Model T245
Type	gasoline L-head
Number of cylinders	(in line) 6
Displacement	230.2 cu in.
Bore	3¼ in.
Stroke	4⅝ in.
Compression ratio	6.7:1
Governed speed	3,400 rpm
Brake horsepower, gross (max w/std accessories)	94 @ 3,400 rpm
Torque, gross (max w/std accessories)	188 lb-ft @ 1,200 rpm
Transmission:	
Manufacturer	New Process Model 88950
Type	helical gear synchro-shift
Number of speeds	four forward; one reverse
Gear ratios	6.40; 3.09; 1.69; 1.00; reverse 7.61
Transfer:	
Manufacturer	New Process Model 88450
Number of speeds	2
Gear ratios	1.96; 1.00
Tires:	
Size	9.00 x 16
Ply	8

CHARACTERISTICS—Continued

Tires—Continued

Pressure:	
Front:	
Highway	40 psi
Cross country	40 psi
Sand	20 psi
Mud or snow	15 psi
Rear:	
Highway	45 psi
Cross country	45 psi
Sand	25 psi
Mud or snow	20 psi
Tread, center to center, front and rear	62 in.

PERFORMANCE

Maximum grade ability (lowest gear with off highway load)	68 percent
Turning radius	27 ft
Fording depth:	
W/o fording kit	42 in.
W/fording kit	84 in.
Fuel consumption (loaded)	(approx) 9 mpg
Cruising range (loaded)	225 mi
Allowable speed (governed)	55 mph
Maximum allowable towed load:	
Cross country	4,000 lb
Highway	6,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8030, C5

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

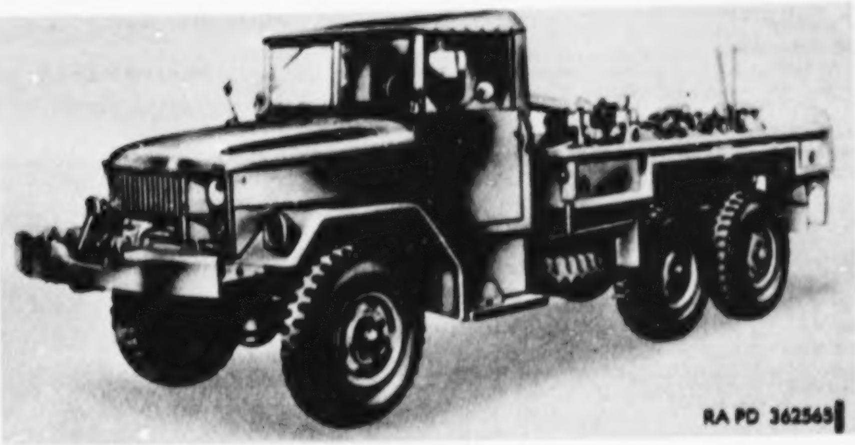
Shipped	
Length	203¾ in.
Width	76 in.
Height	65 in.
Volume	583 cu ft
Area	107 sq ft
Gross weight	
Ship tons	14.58

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-741, TM 9-8030, TM 9-1826A, TM 9-1828A, TM 9-2920-210-34, TM 9-1825B, TM 9-2520-232-35, TM 9-2320-212-20P, LO 9-8030, SB 9-1, SB 9-184/1.

TRUCK, MAINTENANCE: EARTH BORING MACHINE AND POLE SETTER, 2½-TON, 6X6, V18A/MTQ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Model	*Line item No.*	*Federal stock No.*
V18A/MTQ	6-98540-00	2320-200-1758

General

TRUCK, MAINTENANCE: earth boring machine and pole setter, 2½-ton, 6x6, V18A/MTQ, mounted on CHASSIS, TRUCK: 2½-ton, 6x6, M44 *, has modified M34 body. The tail-gate of the body is removed and bedplate of body cut and reinforced at rear to support the earth boring machine, model "HD". The front part of bedplate, behind truck cab, is cut to mount a V18A rear winch. Mounts for collapsible cable reel, four earth augers, wheel chock with chain, pole-lifting jack, and support legs are bolted to body and chassis. The boring machine is equipped with integral derrick consisting of derrick tube, derrick sheave, snatch sheave, and a strap sheave. The boring machine and rear winch receive power from transfer power take-off through power divider, secured to rear winch mounting frame from underneath vehicle. The power divider is connected to transfer power take-off of truck. The machine is controlled by the control lever operating handle assembly mounted on left-hand side of boring machine. Rear winch is controlled from cab of vehicle through control lever linkage.

Differences among models

Data plate location

The identification (name) plate is located on the right-hand side of the instrument panel.

Classification: Standard

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o front winch	16,735 lb
W/front winch	17,150 lb
Payload:	
Off highway	2,390 lb
On highway	6,390 lb
Gross:	
W/o front winch:	
Off highway	19,125 lb
On highway	23,125 lb
W/front winch:	
Off highway	19,540 lb
On highway	23,540 lb
Length overall:	
W/o front winch	317 in.
W/front winch	330 in.
Width overall	88 in.
Height overall	107 in.
Height (minimum reducible)	88 in.
Axle gear ratio	6.72:1
Axle load:	
Empty:	
W/o front winch:	
Front	
Rear	
W/front winch:	
Front	
Rear	
Loaded:	
W/o front winch:	
Front	
Bogie	
W/front winch:	
Front	
Bogie	
Ground clearance	14 in.
Angle of approach:	
W/o front winch	45 deg
W/front winch	40 deg
Angle of departure	26 deg
Body inside dimensions:	
Length	
Width	
Height	
Fuel octane rating	72 to 80
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase refill	9 qt
Differential (each)	7 qt
Transmission:	
W/o power take-off	8½ pt
W/power take-off	10½ pt

* For characteristics and data, see item on page 21-17.

Transfer	7 qt
Transfer power take-off (initial chassis run-in)	½ qt
Front winch	2½ pt
Rear winch worm housing	4 qt
Power-divider	3½ qt
Earth boring machine:	
Clutch and brake case	5 qt
Intermediate case	5 qt
Boring case	10 qt
Electrical system:	
Voltage	24 volt
Number of batteries (12 volts each)	2
Ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air/hydraulic
Parking, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental Motor Corp	Model COA-331
Type	gasoline, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum w/std accessories	146 @ 3,400 rpm
Maximum w/o std accessories	165 @ 3,400 rpm
Torque:	
Maximum w/std accessories	248 lb-ft @ 1,400 rpm
Maximum w/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.98:1
Tires:	
Number	6
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross-country	35 psi
Sand	15 psi
Tread, center-to-center, front	69⅝

PERFORMANCE

Computed grade ability in lowest gear	
Turning radius:	
W/o front winch	34½ ft
W/front winch	35½ ft
Fuel consumption	6 mpg
Cruising range	300 mi
Allowable speed (governed)	60 mph
Fording depth:	
W/o fording kit	30 in.
W/fording kit	72 in.
Front winch capacity	10,000 lb
Rear winch capacity	15,000 lb
Earth boring machine boring depth (max)	7 ft

EQUIPMENT

Basic Issue Items: See TM 9-8022

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

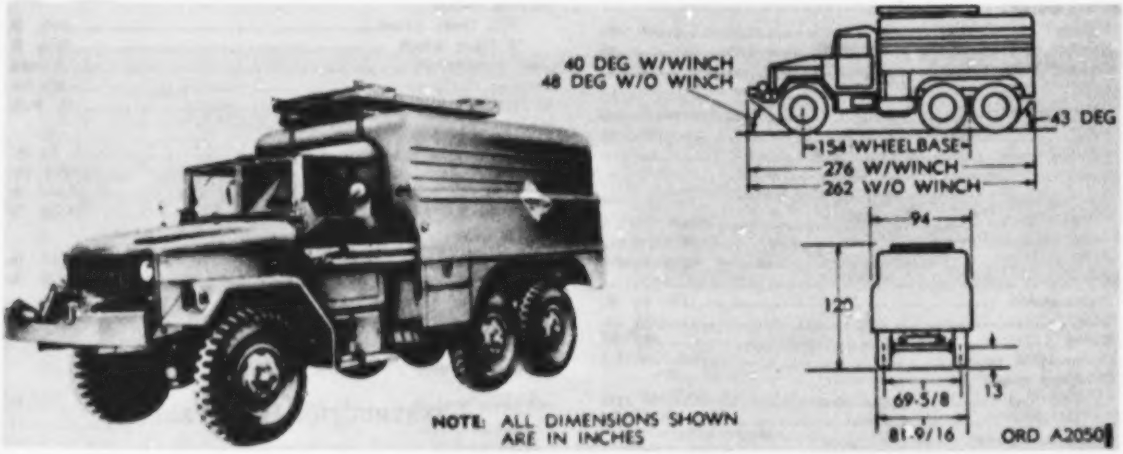
Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL G-742, LO 9-2320-209-12, TM 9-8022, TM 9-2320-209-20P, TM 9-2320-209-35P, TM 9-2300-223-20P.

TRUCK, MAINTENANCE: TELEPHONE CONSTRUCTION AND MAINTENANCE, 2½-TON, 6X6, V17A/MTQ



Model	*Line item No.*	*Federal stock No.*
V17A/MTQ	6-93520-00	2320-200-1288

General

TRUCK, MAINTENANCE: telephone construction and maintenance, 2½-ton, 6 x 6, V17A/MTQ, has a special body mounted on CHASSIS, TRUCK: 2½-ton, 6 x 6, M44 *. The body is designed for telephone work and has compartments built into side panels of body. Compartments are accessible through hinged doors on the outside of panels. Other openings in side panels provide access to drum and auxiliary shafts of V-17A rear winch that is mounted in front end of body. The rear winch is also used with pole derrick. The derrick, when not in use, is carried in left-hand side of body and held in place by two derrick leg holddown clamps. Two wheel chocks with chains and two support legs are provided. A pillow block transfers power from transfer power takeoff to rear winch.

Differences among models

Data plate location

The identification (name) plate is located on the right-hand side of the instrument panel.

Classification: Standard.

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o front winch	16,100 lb
W/front winch	16,550 lb
Payload:	
Off highway	2,290 lb
On highway	6,290 lb
Gross:	
W/o front winch:	
Off highway	18,390 lb
On highway	22,390 lb
W/front winch:	
Off highway	18,840 lb
On highway	22,840 lb

Length overall:	
W/o front winch	262 in.
W/front winch	276 in.
Width overall	94 in.
Height overall	120 in.
Height (minimum reducible)	120 in.
Axle gear ratio	6.72:1
Axle load:	
Empty:	
W/o front winch:	
Front	
Rear	
W/front winch:	
Front	
Rear	
Loaded:	
W/o front winch:	
Front	
Bogie	
W/front winch:	
Front	
Bogie	
Ground clearance	13 in.
Angle of approach:	
W/o front winch	48 deg
W/front winch	40 deg
Angle of departure	43 deg
Pintle height, empty	36 in.
Body inside dimensions:	
Length	
Width	
Height	
Fuel octane rating	
Capacities:	
Fuel tank	50 gal
Cooling system	22 qt
Crankcase refill	9 qt
Differential (each)	7 qt
Transmission:	
W/o power take-off	8½ pt
W/power take-off	10½ pt
Transfer	7 qt
Transfer power take-off (initial chassis run-in)	½ pt

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* For characteristics and data, see item on page 21-19.

Front winch	2⅛ pt
Rear winch worm housing	4 qt
Pillow block	⅛ qt
Electrical system:	
Voltage	24 volt
Number of batteries (12 volts each)	2
Ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air/hydraulic
Parking, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental Motor Corp	Model COA-331
Type	gasoline, valve-in-head
Number of cylinders	6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.78:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum w/std accessories	146 @ 3,400 rpm
Maximum w/o std accessories	165 @ 3,400 rpm
Torque:	
Maximum w/std accessories	248 lb-ft @ 1,400 rpm
Maximum w/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.98:1
Tires:	
Number	6
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross-country	35 psi
Sand	15 psi
Tread, center-to-center, front	69⅝ in.

PERFORMANCE

Computed grade ability in lowest gear	
Turning radius:	
W/o front winch	34⅛ ft
W/front winch	35⅛ ft
Fuel consumption	6 mpg
Cruising range	300 mi
Allowable speed (governed)	60 mph
Fording depth:	
W/o kit	30 in.
W/kit	72 in.
Front winch capacity	10,000 lb
Rear winch capacity	15,000 lb
Towed load:	
Highway	10,000 lb
Cross-country	6,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

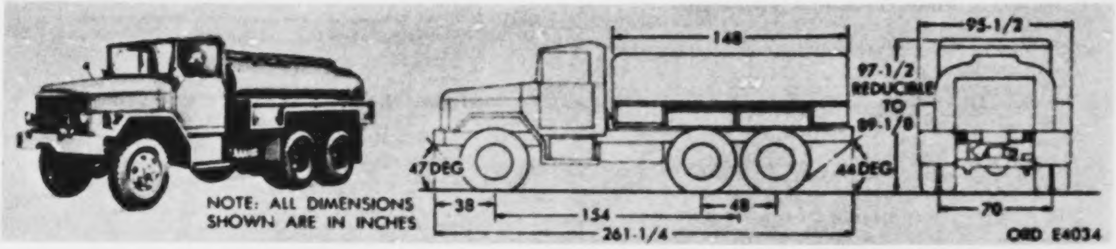
Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: SNL G-742, LO 9-2320-209-12, TM 9-8022, TM 9-2320-209-20P, TM 9-2320-209-35P, TM 9-2300-223-20P.

TRUCK, TANK: GASOLINE, 2½-TON, 6 X 6, 1200-GAL, M49 AND M49C, W/E



Major item

Shown: Truck, Tank: Gasoline, 2½-ton 6 x 6, 1200 Gal, M49

Model	*Line item No.*	*Federal stock No.*
M49, w/o winch	4-61326-20	2320-835-8545
M49C, w/Segregator kit	4-61328-10	2320-141-8325

General

TRUCK, TANK: gasoline, 2½-ton, 6 x 6, 1200-gal, M49 and M49C, w/ and w/o winch, is mounted on M45 chassis. The tank body has 200-, 400-, and 600-gallon sections. A delivery pump mounted in rear compartment fills or empties the various sections. No trailer connections or a pintle are provided on M49. Trailer connections and pintles are provided on model M49C.

Differences among models

M49C is a standard M49 equipped with kit, segregator, trailer connections and pintles, aviation gasoline.

Data plate location

Plates are located on the instrument panel.

Classification:

M49—Standard B (OTCM 37057).
M49C—Standard A (OTCM 37057).

CHARACTERISTICS

Crew	2
Weight (net):	
M49	13,490 lb
M49C	13,955 lb
Length	261¼ in.
Width	95½ in.
Height:	
Maximum	97½ in.
Reducible to	89⅛ in.
Wheel base	154 in.
Length of tank	148 in.
Center to center of rear axles	48 in.
Fuel octane rating	72 to 80
Axle gear ratio	6.772:1
Ground clearance (loaded)	12⅝ in.
Capacities:	
Fuel	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission	4.25 qt
Transfer	7 qt
Axles (each)	7 qt
Electrical system:	24 volts
Number of batteries	2 (12 volts)
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air-hydraulic
Parking, type	transfer

Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	4-cycle, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower (max):	
W/std accessories	127 @ 3,400 rpm
W/o std accessories	146 @ 3,400 rpm
Torque (max):	
W/std accessories	248 lb-ft @ 1,400 rpm
W/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.98:1
Tires:	
Size	9 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	67⅜ in.
Axles:	
Type	double reduction, full floating
Weight capacity:	
Empty M49:	
Front	5,250 lb
Bogie	13,175 lb

PERFORMANCE

Computed grade ability in lowest gear, loaded	62 percent
Turning radius	36 ft
Fording depth:	
W/o kit	40 in.
W/kit	72 in.
Fuel consumption, loaded	7 mpg
Cruising range, loaded	350 mi
Allowable speed, governed	58 mph

EQUIPMENT

Basic Issue Items: See TM 9-8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

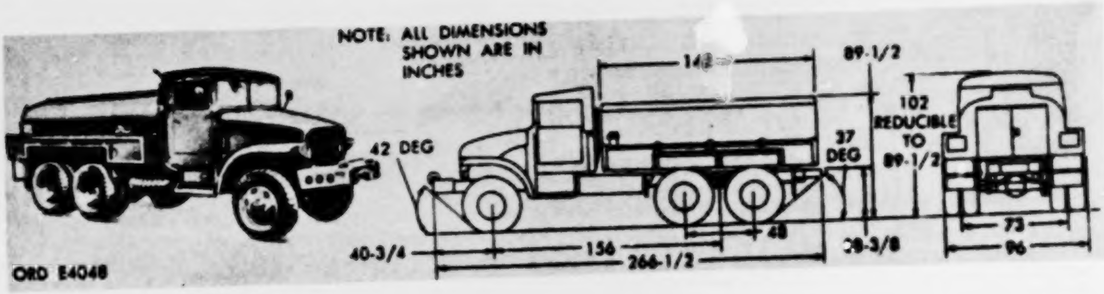
Shipped	
Length	261¼ in.
Width	95⅜ in.
Height	97⅜ in.
Volume	1,260 cu ft
Area	173 sq ft
Gross weight	
Ship tons	31.50

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G742, TM 9-8022, TM 9-8023-1, TM 9-8023-2, TM 9-8627, TM 9-8647, TM 9-2320-209-20P, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601.

TRUCK, TANK: FUEL SERVICING, 2½-TON, 6 X 6, 1200 GAL, M217 AND M217C, W/E



Shown: Truck, Tank: Fuel Servicing, 2½-Ton, 6 x 6, 1200 Gal, M217

Model	*Line item No.*	*Federal stock No.*
M217, w/e	4-61326-28	2320-834-4511
M217C, w/e, w/kit segregator	4-61328-20	2320-141-8252

General

TRUCK, TANK: fuel servicing 2½-ton, 6 x 6, 1,200 gal, M217 and M217C, w/e, is used to transport and dispense gasoline. The 1,200 gallon tank is divided into three compartments of 200, 400, and 600 gallons each. The transfer has an opening on the left side for mounting a power-take-off and accessory drive to operate gasoline tank pump and winch on vehicle so equipped.

Difference among models

M217C is a standard M217 equipped with a Kit, segregator, aviation gasoline.

Data plate location

Data plate is located on the instrument panel.

Classification: Standard B (OTCM 37057).

CHARACTERISTICS

Crew	2
Weight: net:	
M217	14,340 lb
M217C	14,805 lb
Length	266½ in.
Width	96 in.
Height (max)	102 in.
Height reducible to	89½ in.
Wheel base	156 in.
Length of tank	148 in.
Center to center of rear axles	48 in.
Ground clearance	12 in.
Fuel octane rating	80
Axle gear ratio	6.166:1
Capacities:	
Fuel	56 gal
Cooling system	22 qt
Crankcase, refill	8¾ qt
Transmission	15 qt
Transfer, w/o power-take-off	6½ pt
Axles:	
Front	15½ pt
Intermediate	13½ pt
Rear	11½ pt
Electrical system	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	General Motors Corp Model 302
Type	gasoline, valve-in-head
Number of cylinders	(in line) 6
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum:	
w/std accessories	130 @ 3,400 rpm
w/o std accessories	145 @ 3,400 rpm
Torque:	
Maximum:	
w/std accessories	480 lb-ft @ 1,200 rpm
w/o std accessories	504 lb-ft @ 1,400 rpm
Transmission:	
Type	hydramatic
Forward speeds	8
Gear ratio:	
High range	High 1:1; Low 4.076:1
Low range	High 3.82:1; Low 15.67:1
Transfer:	
Speeds	1
Gear ratio	1.16:1
Axles:	
Type	hypoid, full-floating
Weight capacity, M217:	
Empty:	
Front	5,330 lb
Bogie	9,010 lb
Loaded:	
Front	5,970 lb
Bogie	13,720 lb
Tires:	
Size	9 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	69⅛ in.

PERFORMANCE

Computed grade ability in lowest gear, loaded	67 percent
Turning radius	34½ ft
Fording depth:	
W/o kit	30 in.
W/kit	80 in.
Fuel consumption, loaded	5.4 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	55 mph

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-749.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

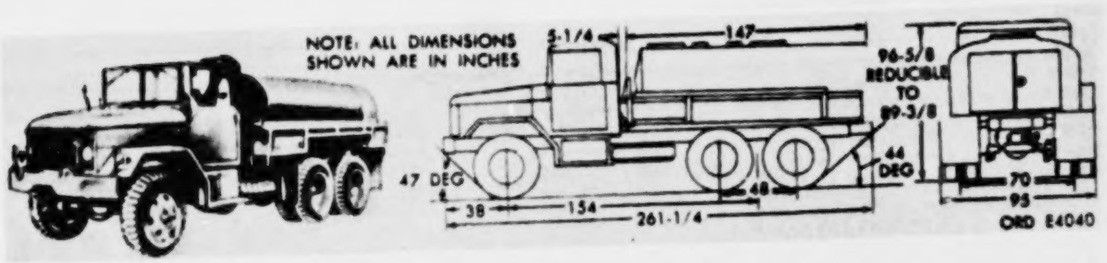
Shipped	
Length	266½ in.
Width	96 in.
Height	102 in.
Volume	1,335 cu ft
Area	178 sq ft
Gross weight	
Ship tons	33.38

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-749, TM 9-8024, TM 9-8025-1, TM 9-8025-2, TM 9-2520-245-35 and 35P, TM 9-8647, TM 9-2920-210-34, TM 9-1825B, TM 9-8627, TM 9-1827A, TM 9-1827C, TM 9-8601, TM 9-1819AC. LO 9-8024.

TRUCK, TANK: WATER, 2½-TON, 6 X 6, 1000 GAL, M50, W/ AND W/O WINCH


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
5-1/4
147
96-5/8 REDUCIBLE TO 89-3/8
47 DEG
44 DEG
48
38
154
261-1/4
70
95
ORD E4040

Major item

Model	*Line item No.*	*Federal stock No.*
M50, w/o wn, w/e	4-61332-25	2320-835-8344
M50, w/wn, w/e	4-61333-00	2320-174-1601

General

TRUCK, TANK: water, 2½-ton, 6 x 6, 1000 gal, M50, w/ and w/o winch, is used to transport and dispense drinking water. The 1000-gallon tank is divided into two compartments. Front compartment, 400 gallons. Rear compartment, 600 gallons, an exhaust heater chamber on underside of the tank body protects the discharge valves and drain pipe during freezing weather. The delivery pump is located at the rear of the tank and is operated from the power-take-off by two drive shafts in series. No trailer connections or pintle are provided. The body-water tank is aluminum construction and insulated with fiber glass. Tank has built-in heating chamber and manhole openings for immersion heater.

Differences among models

Data plate location

Data plate is located on the instrument panel.

Classification: Standard A (OTCM 30841).

CHARACTERISTICS

	2
Crew	15,038 lb
Weight net:	
Payload:	3,500 lb
Off highway	8,500 lb
On highway	
Gross:	18,888 lb
Off highway	23,888 lb
On highway	261¼ in.
Length	95 in.
Width	
Height:	96⅝ in.
Maximum	89⅜ in.
Reducible to	154 in.
Wheel base	147 in.
Length of tank	48 in.
Center to center of rear axles	72 to 80
Fuel octane rating	12⅜ in.
Ground clearance (loaded)	6.722:1
Axle gear ratio	
Axle load:	
Empty:	5,530 lb
Front	9,508 lb
Bogie	
Loaded (w/off highway payload):	6,056 lb
Front	12,832 lb
Bogie	
Capacities:	50 gal
Fuel	22 qt
Cooling system	9 qt
Crankcase, refill	4.25 qt
Transmission	7 qt
Transfer	7 qt
Axles (each)	
Electrical system:	2 (12 volt)
Number of batteries	negative
Type of ground	
Brakes:	Timken-Detroit
Manufacturer	air-hydraulic
Type	transfer
Parking brake, type	
Engine:	
Manufacturer:	Model OA-331
Reo Motors Inc	Model COA-331
Continental	4-cycle, valve-in-head
	(in line) 6
Number of cylinders	331 cu in.
Displacement	4.125 in.
Bore	4.125 in.
Stroke	6.73:1
Compression ratio	
Governed speed:	3,400 rpm
Full load	3,600 rpm
No load	
Brake horsepower (max):	127 @ 3,400 rpm
W/std accessories	146 @ 3,400 rpm
W/o std accessories	
Torque (max):	248 lb-ft @ 1,400 rpm
W/std accessories	270 lb-ft @ 1,400 rpm
W/o std accessories	
Transmission:	synchromesh
Type	5
Forward speeds	High 1:1; Low 7.55:1
Gear ratio	
Transfer:	2
Speeds	High 1:1; Low 1.98:1
Gear ratio	
Tires:	9.00 x 20
Size	8
Ply	
Pressure:	45 psi
Highway	
Cross country	
Sand	67⅜ in.
Tread, center-to-center, front	

PERFORMANCE

Computed grade ability in lowest gear, loaded	57.5 percent
	36 ft
Turning radius	
Fording depth:	40 in.
W/o kit	72 in.
W/kit	
	7 mpg
Fuel consumption loaded	350 mi
Cruising range, loaded	58 mph
Allowable speed, governed	

EQUIPMENT

Basic Issue Items: See TM 9-8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

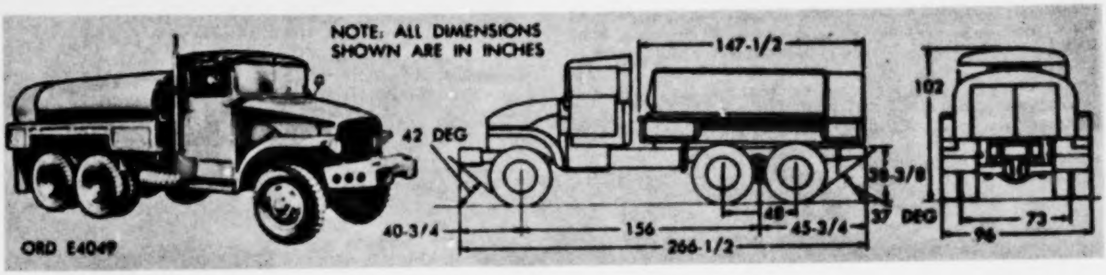
Shipped	
Length	261¼ in.
Width	95 in.
Height	96⅝ in.
Volume	1,272 cu ft
Area	172 sq ft
Gross weight	
Ship tons	31.80

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-742, TM 9-8022, TM 9-8023-1, TM 9-8023-2, TM 9-8627, TM 9-8647, TM 9-2320-209-20P, TM 9-1828A, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601

TRUCK, TANK: WATER, 2½-TON, 6 X 6, 1,000 GAL, M222



Major item

Model	*Line item No.*	*Federal stock No.*
M222, w/e	4-61332-30	2320-834-4514

General

TRUCK, TANK: water, 2½ ton, 6 x 6, 1,000 gal, M222, is used to transport drinking water. The 1000-gallon tank is divided into two compartments, 400-gallon forward, and 600-gallon rear, made of aluminum with steel skirting. The tank is insulated with fibre glass and has a built-in heating chamber; manhole openings are provided for immersion heater. A rear mounted water pump, capacity 70 gallons per minute, is operated through propeller shafts from power-take-off and accessory drive mounted on transfer. Vehicle is furnished without winch, trailer brake service lines, trailer-light recepticale, or pintle. The tank body is mounted on a M207 chassis.

Difference among models

Data plate location

Data plate is located on the instrument panel.

Classification: Standard B.

CHARACTERISTICS

Crew	2
Weight:	
Net	14,100 lb
Payload:	
On highway	8,500 lb
Off highway	3,500 lb
Gross:	
On highway	22,950 lb
Off highway	17,950 lb
Length	266½ in.
Width	96 in.
Height	102 in.
Wheel base	156 in.
Length of tank	147½ in.
Center to center of rear axles	48 in.
Fuel octane rating	80
Axle gear ratio	6.166:1
Axles:	
Type	hypoid, full-floating
Weight capacities:	
Empty:	
Front	5,480 lb
Bogie	8,620 lb
Loaded:	
Front	5,930 lb
Bogie	12,020 lb

Capacities:	
Fuel	56 gal
Cooling system	22 qt
Crankcase, refill	8¾ qt
Transmission	15 qt
Transfer, w/o power-take-off	6½ pt
Axle:	
Front	15½ pt
Intermediate	13½ pt
Rear	11½ pt
Electrical system:	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	General Motors Corp, Model 302
Type	gasoline, valve-in-head
Number of cylinders	(in line) 6
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
W/std accessories	130 @ 3,400 rpm
W/o std accessories	145 @ 3,400 rpm
Torque:	
W/std accessories	480 lb-ft @ 1,200 rpm
W/o std accessories	504 lb-ft @ 1,400 rpm
Transmission:	
Type	hydramatic
Forward speeds	8
Gear ratio:	
High range	High 1:1; Low 4.076:1
Low range	High 3.82:1; Low 15.67:1
Transfer:	
Speeds	1
Gear ratio	1.16:1
Tires:	
Size	9 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	69½ in.

EQUIPMENT

Basic Issue Items: See ORD 7, SNL G–749.

INSTRUCTIONAL MANUAL

STORAGE AND SHIPMENT DATA

Within Continental United States

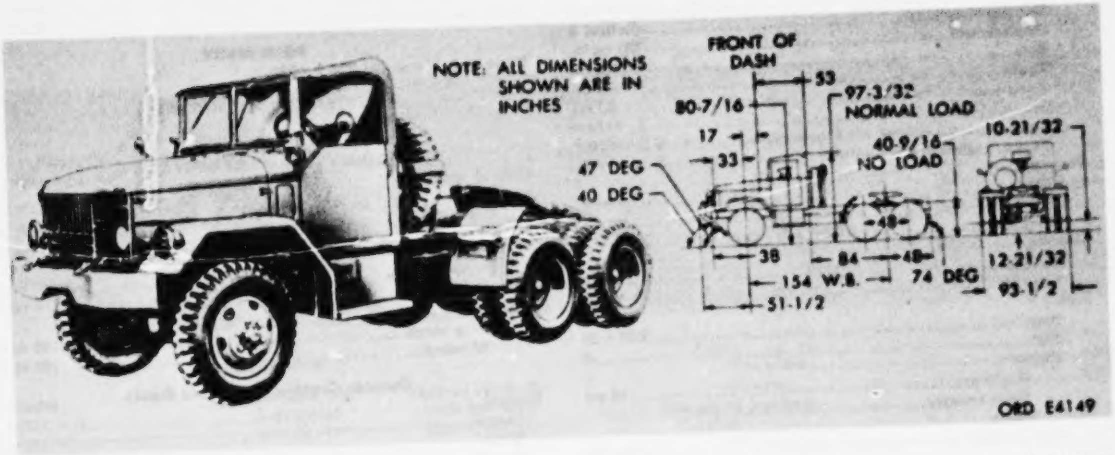
Shipped	
Length	266½ in.
Width	96 in.
Height	102 in.
Volume	1,335 cu ft
Area	178 sq ft
Gross weight	
Ship tons	33.38

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G–749, TM 9–8024, TM 9–8025–1, TM 9–8025–2, TM 9–2520–245–35 and 35P, TM 9–2920–210–34, TM 9–1825B, TM 9–8647, TM 9–8627, TM 9–1827A, TM 9–1827C, TM 9–8601, TM 9–1819AC, LO 9–8024.

TRUCK, TRACTOR: 2½-TON, 6 X 6, M48, W/ AND W/O WINCH



ORD E4149

Major item

Model	*Line item No.*	*Federal stock No.*
M48, w/wn, w/e	4-61340-00	2320-835-8345
M48, w/o wn, w/e	4-61370-00	2320-835-8346

General

TRUCK, TRACTOR: 2½-ton, 6 x 6, M48, w/ and w/o winch, is designed to tow a semitrailer attached to fifth wheel mounted on vehicle. Maximum towed load for tractor is 17,000 pounds for cross-country travel and 36,000 pounds for travel on highway. Spare wheel carrier and toolbox are mounted on rear of cab. Air-brake hose and electrical cable for semitrailer service are stowed on airbrake hose support mounted at rear of spare wheel carrier. Pioneer tools are stowed just forward of fifth wheel. Chassis M45 is used.

Difference among models

Data plate location

Data plate is located on instrument panel.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	11,430 lb
W/winch	11,841 lb
Payload:	
Off highway	7,000 lb
On highway	12,000 lb
Gross:	
Off highway:	
W/o winch	18,430 lb
W/winch	18,841 lb
On highway:	
W/o winch	23,430 lb
W/winch	23,841 lb
Length	253½ in.
Width	93½ in.
Height:	
Normal load	97 3/32 in.
No load	40 9/16 in.
Ground clearance	12⅝ in.
Pintle height, empty	35 in.
Height to center of fifth wheel, empty	51½ in.
Height to rear of fifth wheel, empty	39 1/16 in.
Fifth wheel mounted forward of bogie axle	4 in.
Wheel base	154 in.

Fuel octane rating	80
Axle gear ratio	6.72:1
Axle:	
Type	double reduction, full floating
Weight capacities:	
Empty:	
Front:	
W/o winch	5,420 lb
W/winch	5,915 lb
Rear (ea):	
W/o winch	3,005 lb
W/winch	2,963 lb
Loaded, off highway:	
Front:	
W/o winch	5,600 lb
W/winch	6,097 lb
Rear (ea):	
W/o winch	6,415 lb
W/winch	6,372 lb
Loaded, on highway:	
Front:	
W/o winch	5,227 lb
W/winch	5,730 lb
Rear (ea):	
W/o winch	8,850 lb
W/winch	8,807 lb
Capacities:	
Fuel	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission:	
W/o power-take-off	4¼ qt
W/power-take-off	5¼ qt
Transfer	7 qt
Axles	(each 7 qt)
Winch:	
Oil capacity	1 qt
Load capacity	10,000 lb
Electrical system:	24 volts
Number of batteries	2 (12 volts)
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air hydraulic
Parking, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331

CHARACTERISTICS—Continued

Capacities—Continued

Engine—Continued

Type	4-cycle, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed (full load)	3,400 rpm
Brake horsepower (max w/std accessories)	146 @ 3,400 rpm
Torque (max w/std accessories)	248 lb-ft @ 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio	High 1:1; Fourth 1.45:1; Low 7.55:1
Transfer:	
Speeds	2
Gear ratio	High 1:1; Low 1.98:1
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	67¾ in.

PERFORMANCE

Computed grade ability in lowest gear, w/off-highway load	40 percent
Turning radius	36 ft
Fording depth, w/o fording kit	30 in.
Fuel consumption, loaded	6 mpg
Cruising range, loaded	350 mi
Allowable speed, governed	58 mph

Maximum pintle tow:	
Off highway (gross)	17,000 lb
On highway (gross)	36,000 lb
Maximum semitrailer, gross	25,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

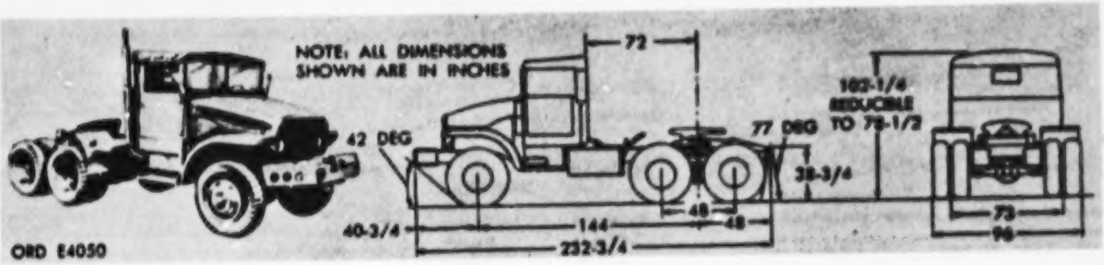
Shipped uncrated.	
Length	253½ in.
Width	93½ in.
Height	97⅝ in.
Volume:	
W/o winch	1,058 cu ft
W/winch	1,118 cu ft
Area:	
W/o winch	155 sq ft
W/winch	164 sq ft

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-742, TM 9-8022, TM9-8028-1, TM9-8028-2, TM 9-8627, TM9-8647, TM 9-2320-209-20P, TM 9-2920-210-34, TM 9-1828A, TM 9-8647, TM 9-8615, TM 9-8628, TM 9-8601, LO 9-8022.

TRUCK, TRACTOR: 2½-TON, 6 X 6, M221, W/ AND W/O WINCH


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
72
42 DEG
77 DEG
102-1/4 REDUCIBLE TO 78-1/2
38-3/4
48
48
144
40-3/4
232-3/4
73
96
ORD E4050

Major item

Model	*Line item No.*	*Federal stock No.*
M221, w/e	4-61400-10	2320-834-4512
M221, w/wn, w/e	4-61430-10	2320-834-4513

General

TRUCK, TRACTOR: 2½-ton, 6 x 6, M221, is designed to tow a semitrailer attached to fifth wheel mounted on vehicle. Maximum towed load for tractor is 17,000 pounds for cross-country travel and 36,000 pounds on highway. Trailer brake service connections and electrical receptacle are located at rear of vehicle for trailer operation, and on a hose support (hosetenna) immediately back of cab for semitrailer brake and light operation.

Vehicle has a 34-inch standard Ordnance fifth wheel with approach ramp, a flexible mast-type support for intervehicular cables and hoses, deck plates over chassis frame and fuel tank, a hand control valve on steering column for independent application of towed load air brakes.

Differences among models

Data plate location

Data plate is located on the instrument panel.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	11,695 lb
W/winch	12,105 lb
Payload:	
Off highway	7,000 lb
On highway	12,000 lb
Gross:	
Off highway, w/o winch	19,045 lb
Off highway, w/winch	19,455 lb
On highway, w/o winch	24,045 lb
On highway, w/winch	24,455 lb
Length	232¾ in.
Width	96 in.
Height	102¼ in.
Height reducible to	78½ in.
Ground clearance	12 in.
Pintle height, empty	34¾ in.
Height to center of fifth wheel, empty	51$\frac{11}{16}$ in.
Fifth wheel mounted forward of bogie axle	4 in.
Wheel base	144 in.
Fuel octane rating	80
Axle gear ratio	6.166:1
Axles:	
Type	double reduction, full-floating
Weight capacities:	
Empty:	
Front:	
W/o winch	5,165 lb
W/winch	5,635 lb
Bogie:	
W/o winch	6,530 lb
W/winch	6,470 lb
Loaded, off highway:	
Front:	
W/o winch	5,565 lb
W/winch	6,035 lb
Bogie:	
W/o winch	13,480 lb
W/winch	13,420 lb
Capacities:	
Fuel	56 gal
Cooling system	22 qt
Crankcase, refill	8¾ qt
Transmission	15 qt
Transfer:	
W/o power-take-off	6½ pt
W/power-take-off	7½ pt
Axle:	
Front	15½ pt
Intermediate	13½ pt
Rear	11½ pt
Winch:	
Oil capacity:	
Bearing and frame housing	1 pt
Worm housing	1¼ pt
Load capacity	10,000 lb
Electrical system:	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Bendix
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer	General Motors Corp., Model 302
Type	gasoline, valve-in-head
Number of cylinders	(in line) 6
Displacement	301.6 cu in.
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum:	
w/std accessories	130@3,400 rpm
w/o std accessories	145@3,400 rpm
Torque:	
Maximum:	
w/std accessories	480 lb-ft@1,200 rpm
w/o std accessories	504 lb-ft@1,400 rpm
Transmission:	
Type	hydramatic
Forward speeds	8

CHARACTERISTICS—Continued

Transmission—Continued	
Gear ratio:	
High range	High 1:1; Low 4.076:1
Low range	High 3.82:1; Low 15.67:1
Transfer:	
Speeds	1
Gear ratio	1.16:1
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	69⅛ in.

PERFORMANCE

Computed grade ability in lowest gear, loaded	52 percent
Turning radius	34⅛ ft
Fording depth, w/o kit	30 in.
Fuel consumption, loaded	5.8 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	55 mph
Maximum tow load allowance:	
Off highway	17,000 lb
On highway	36,000 lb

EQUIPMENT

Basic Issue Items: See ORD 7, SNL G749.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

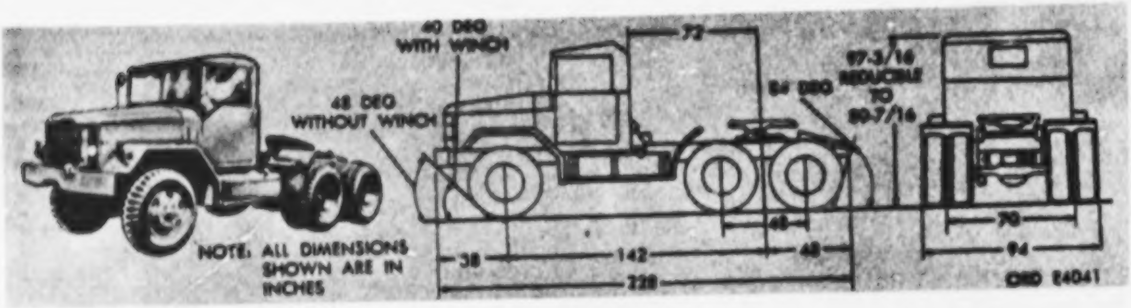
Shipped uncrated.	
Length	282¾ in.
Width	96 in.
Height	102¾ in.
Volume	1,015 cu ft
Area	155 sq ft
Gross weight	
Ship tons	25.38

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G749, TM 9-8024, TM 9-8025-1, TM 9-8025-2, TM 9-2520-245-35 and 35P, TM 9-2920-210-34, TM 9-8647, TM 9-1825B, TM 9-8627, TM 9-1827A, TM 9-1827C, TM 9-8601, TM 9-1819AC, LO 9-8024.

TRUCK, TRACTOR: 2½-TON, 6 X 6, M275, W/ AND W/O WINCH



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Model	*Line item No.*	*Federal stock No.*
M275, w/e	4-61400-20	2320-835-8609
M275, w/wn, w/e	4-61420-20	2320-835-8611

General

TRUCK, TRACTOR: 2½-ton, 6 x 6, M275, w/ and w/o winch, is designed to tow a semitrailer attached to fifth wheel mounted on vehicle. Maximum towed load for tractor is 17,000 pounds for cross-country travel and 30,000 pounds on highway. There is no spare tire carrier or toolbox. Tools are stowed under or behind companion seat in cab. Airbrake hose and electrical cable, for trailer brake and lighting service, are stowed on airbrake hose support, behind the cab of the vehicle. Pioneer tools are stowed just forward of fifth wheel. Vehicle has a 34-inch Ordnance standard fifth wheel with approach ramp, a flexible mast-type support for intervehicular cable and hose, deck plates over chassis frame and fuel tank, and hand control valve on steering column for independent application of towed load airbrakes.

Difference among models

Data plate location

Data plate is located on the instrument panel.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o winch	11,179 lb
W/winch	11,590 lb
Payload:	
Off highway	7,000 lb
On highway	12,000 lb
Gross:	
Off highway:	
W/o winch	18,179 lb
W/winch	18,590 lb
On highway:	
W/o winch	23,179 lb
W/winch	23,590 lb
Length	228 in.
Width	94 in.
Height	97³⁄₁₆ in.
Height reducible to	80⁷⁄₁₆ in.
Ground clearance	18¾ in.
Height of fifth wheel, empty	50¼ in.
Fifth wheel mounted forward of bogie axle	4 in.
Wheel base	142 in.
Fuel octane rating	80
Axle gear ratio	6.722:1
Axles:	
Type	double reduction full floating
Weight capacities:	
Empty:	
Front:	
W/o winch	5,275 lb
W/winch	5,770 lb
Bogie:	
W/o winch	5,904 lb
W/winch	5,820 lb
Loaded (off highway):	
Front:	
W/o winch	5,721 lb
W/winch	6,212 lb
Bogie:	
W/o winch	12,808 lb
W/winch	12,724 lb
Capacities:	
Fuel	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission:	
W/o power-take-off	4½ qt
W/power-take-off	5½ qt
Transfer	7 qt
Axles	(each) 7 qt
Winch:	
Oil capacity	1 qt
Load capacity	10,000 lb
Electrical system:	
Potential	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air-hydraulic
Parking, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	gasoline, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum:	
w/std accessories	127 @3,400 rpm
w/o std accessories	146 @3,400 rpm
Torque:	
Maximum:	
w/std accessories	248 lb-ft @1,400 rpm
w/o std accessories	270 lb-ft @1,400 rpm

CHARACTERISTICS—Continued

Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio	High 1:1; Low 7.55:1
Transfer:	
Speeds	2
Gear ratio	High 1:1; Low 1.98:1
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center, front	67⅝ in.

PERFORMANCE

Computed grade ability in lowest gear	57.5 percent
Fuel consumption, loaded	7 mpg
Cruising range, loaded	350 mi
Allowable speed, governed	58 mph
Maximum towed load allowance:	
Off highway	17,000 lb
On highway	36,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

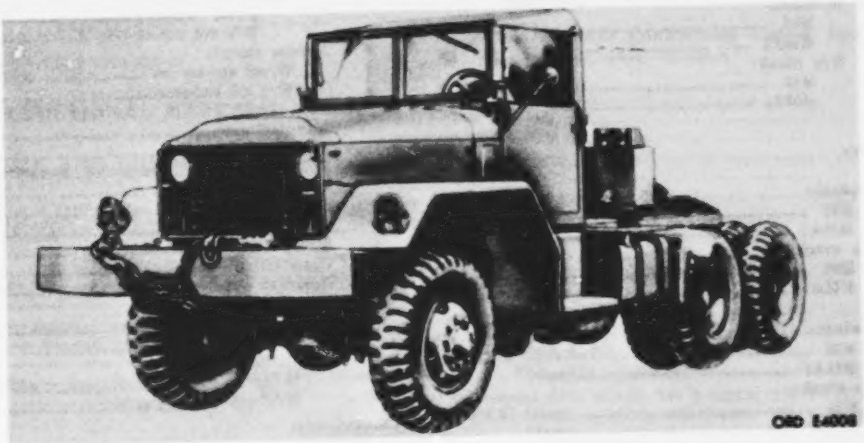
Shipped	
Length	228 in.
Width	94 in.
Height	97⅛ in.
Volume:	
W/o winch	1,005 cu ft
W/o winch	1,066 cu ft
Area:	
W/winch	152 sq ft
W/winch	158 sq ft
Gross weight	
Ship tons w/wn	26.65

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G742, TM 9–8022, TM 9–8023–1, 2, 3, 4, 5, and 6 TM, 9–8627, TM 9–8647, TM 9–1828A, TM 9–1825B, TM 9–2920–210–34, TM 9–8615, TM 9–8601, TM 9–8623, TM 9–2320–209–20P.

TRUCK, TRACTOR: 5-TON, 6X6, M52 AND M52A1, W/ AND W/O WINCH



Major Item

Model	*Line item No.*	*Federal stock No.*
M52, w/o winch, soft top cab	4-61460-30	2320-835-8326
M52, w/winch, soft top cab	4-61490-05	2320-835-8329
M52, w/o winch, hard top cab	4-61460-51	2320-835-8529
M52, w/winch, hard top cab	4-61460-06	2320-835-8530
M52A1, w/o winch	4-61490-10	2320-086-7480
M52A1, w/winch	4-61460-35	2320-086-7479

General

TRUCK, TRACTOR: 5-ton, 6x6, M52 or M52A1, w/ and w/o winch, soft or hard top cab, is used to tow semitrailers.

Each tractor truck is also designed to operate under unusual conditions, when proper cleaning, lubrication, storage and handling has been performed assuring proper functioning against excessive wear and deterioration under extreme cold and hot weather conditions, as well as in fording operations. Each tractor truck is equipped with 6-wheel drive.

Differences among models

The M52 tractor truck has a spark plug ignition engine. The M52A1 has a diesel, compression-ignition engine.

Data plate location

Data plate is mounted on the instrument panel to the right of the instrument cluster.

Classification: M52 w/o winch, soft top cab—Standard B (OTCM 38093.
M52 w/winch, soft top cab—Standard B (OTCM 38093)
M52 w/o winch, hard top cab—Standard B (OTCM 38093)
M52 w/winch, hard top cab—Standard B (OTCM 38093)
M52A1, w/o winch—Standard B (ANCTCM 1120)
M52A1, w/winch—Standard B (ANCTCM 1120)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/winch:	
M52	18,996 lb
M52A1	19,456 lb
W/o winch:	
M52	18,818 lb
M52A1	19,063 lb
Payload:	
Off highway	15,000 lb
On highway	25,000 lb
Gross:	
Off highway:	
W/winch:	
M52	33,996 lb
M52A1	34,456 lb
W/o winch:	
M52	33,313 lb
M52A1	
On highway:	
W/winch:	
M52	43,996 lb
M52A1	44,456 lb
W/o winch:	
M52	43,313 lb
M52A1	
Length:	
W/winch	273 in.
W/o winch	257½ in.
Width	97 in.
Height	103⅛ in.
Height reducible to	
Ground clearance	10½ in.
Angle of approach (w/winch):	
M52	37 deg
M52A1	
Angle of departure (w/winch)	68 deg
Height of fifth wheel, empty	35.60 in.
Fifth wheel mounted forward of bogie axle	
Wheelbase	167 in.
Fuel octane rating (gasoline) (M52)	80
Fuel cetane rating: (diesel) (M52A1)	40
Axle gear ratio	6.443:1
Axles:	
Type	double-reduction, full-floating
Weight capacities:	
Empty:	
Front:	
W/winch:	
M52	9,008 lb
M52A1	

- W/o winch:
  - M52 .... 8,163 lb
  - M52A1 ....
- Rear:
  - W/winch:
    - M52 .... 4,994 lb
    - M52A1 ....
  - W/o winch:
    - M52 .... 5,075 lb
    - M52A1 ....

Loaded:

- Off highway:
  - Front:
    - W/winch:
      - M52 .... 9,618 lb
      - M52A1 ....
    - W/o winch:
      - M52 .... 8,778 lb
      - M52A1 ....
  - Rear:
    - W/winch:
      - M52 .... (each) 12,189 lb
      - M52A1 .... (each)
    - W/o winch:
      - M52 .... (each) 12,270 lb
      - M52A1 .... (each)

Capacities:

- Fuel tank:
  - M52 .... 110 gal
  - M52A1 .... 110 gal
- Cooling system:
  - M52 .... 44 qt
  - M52A1 .... 44 qt
- Crankcase, dry refill:
  - M52 .... 22 qt
  - M52A1 .... 22 qt
- Transmission:
  - W/o power take-off:
    - M52 .... 9 qt
    - M52A1 .... 9 qt
  - W/power take-off:
    - M52 .... 11 qt
    - M52A1 .... 11 qt
- Transfer:
  - M52 .... 5¼ qt
  - M52A1 .... 5¼ qt
- Axles (rear each):
  - M52 .... 12 qt
  - M52A1 .... 12 qt
- Winch:
  - Oil capacity:
    - M52 .... (front) 2.6 qt: (rear) 3 qt
    - M52A1 .... (front) 2.6 qt: (rear) 3 qt

Load capacity .... 20,000 lb

Electrical system:

- Voltage .... 24 volt
- Number of batteries 2
- Type of ground .... negative

Brakes:

- Manufacturer .... Bendix
- Type .... air-hydraulic
- Parking, type .... transfer

Engine:

- M52:
  - Manufacturer .... Continental
  - Model R-6602
  - Type .... 4 cycle, valve-in-head, gasoline
  - Number of cylinders .... (in line) 6
  - Displacement .... 602 cu in.
  - Bore .... 4.375 in.
  - Stroke .... 5.375 in.
  - Compression ratio 6.4:1
  - Governed speed .... 2,800 rpm
  - Brake horsepower:
    - Maximum:
      - W/std accessories .... 196 @ 2,800 rpm
      - W/o std accessories .... 224 @ 2,800 rpm
  - Torque (max):
    - W/std accessories .... 480 lb-ft @ 1,200 rpm
    - W/o std accessories ....
- M52A1:
  - Manufacturer .... Mack
  - Model ENDT-673
  - Type .... liquid cooled, compression ignition, diesel
  - Number of cylinders 6
  - Displacement .... 672 cu in.
  - Bore .... 4.875 in.
  - Stroke .... 6 in.
  - Compression ratio 16.89:1
  - Governed speed .... 2,100 rpm
  - Brake horsepower (max):
    - W/std accessories .... 211 @ 2,100 rpm
    - W/o std accessories ....
  - Torque (max):
    - W/std accessories .... 610 lb-ft @ 1,500 rpm
    - W/o std accessories ....

Transmission:

- Manufacturer .... Spicer
- Model:
  - M52 6352
  - M52A1 6453
- Type .... synchromesh
- Speeds:
  - Forward 5
  - Reverse 1

Gear ratio:	M52	M52A1
High	1:1	.78:1
Low	7.31:1	7.07:1
Reverse	7.33:1	6.09:1

Transfer:

- Speeds 2
- Gear ratio:
  - High 1:1
  - Low 2.02:1

Tires:

- Size .... 11.00 x 20
- Ply 12
- Pressure:
  - Highway .... 70 psi
  - Cross-country .... 35 psi
  - Sand .... 15 psi
- Tread, center-to-center, front .... 78⅝ in.

PERFORMANCE

Computed grade ability in lowest gear:

- M52 (W/off highway load) .... 77.18 percent
- M52A1 .... 74.5 percent

Turning radius:

- W/o winch .... 19 ft, 4½ in.
- W/winch .... 19 ft, 7½ in.

Fording depth .... 30 in.

Fuel consumption, loaded:

- M52 .... 4.44 mpg
- M52A1 .... diesel 5.4 mpg; CIE 5.07 mpg

Cruising range, loaded:

- M52 .... 300 mi
- M52A1 .... 400 mi

Allowable speed, governed:

- M52 .... 50 mph
- M52A1 .... 50 mph

Maximum towed load allowance:

Off highway	30,000 lb
On highway	55,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–2320–211–10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 truck, uncrated.

M52:	W/winch	W/o winch
Length	273 in.	257½ in.
Width	97 in.	97 in.
Height	86⅛ in.	86⅛ in.
Volume	1,342 cu ft	1,245 cu ft
Area	184 sq ft	174 sq ft
Gross weight	19,100 lb	18,400 lb
Ship tons	33.55	31.13

M52A1:	W/winch	W/o winch
Length		
Width		
Height		
Volume		
Area		
Gross weight		
Ship tons		

Outside Continental United States

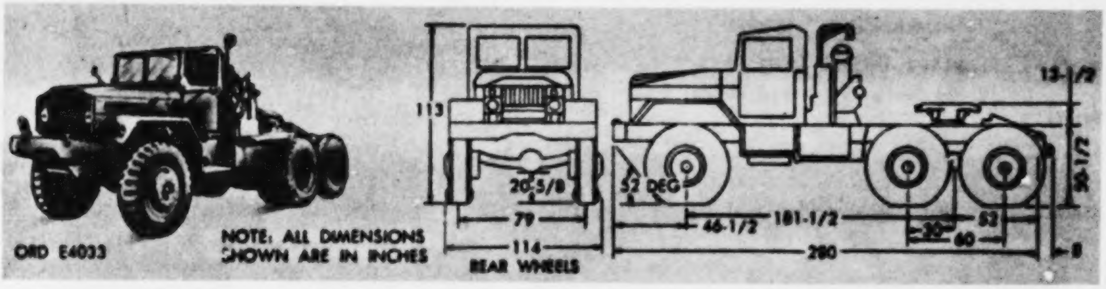
Shipped 1 tractor truck, uncrated.

M52:	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

M52A1:	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G–744, TM 9–1837A, TM 9–1837B, TM 9–1827A, TM 9–1827C, TM 9–8615, TM 9–1828A, TM 9–1825B, TM 9–8627, TM 9–8647, TM 9–2320–211–10, TM 9–2320–211–20, TM 9–2320–211–20P, TM 9–2920–210–34, LO 9–2320–211–12.

TRUCK, TRACTOR: 10-TON, 6 X 6, M123, M123C, AND M123D



Major item

Model	*Line item No.*	*Federal stock No.*
M123	4-61640-40	2320-395-1875
M123C	4-61580-00	2320-294-9552
M123D	4-61590-01	2320-542-2509

General

TRUCK, TRACTOR: 10-ton, 6 x 6, M123, M123C, and M123D, is a heavy duty vehicle designed primarily for use with a special purpose semitrailer in combat vehicle recovery operations. A semiautomatic fifth wheel is mounted on the frame behind the cab.

The power train and systems include the transmission and transfer, propeller shafts, front and rear axles, spring suspension, and frame, steering system, brake system, cab, and winch.

Differences among models

The truck M123 has dual midship winches and high mounted fifth wheel; the M123C has a single midship winch and low mounted fifth wheel; and the M123D has dual midship winches and low mounted fifth wheel.

Data plate location

The vehicle identification plate is located on the instrument panel.

Classification: M123—Standard B (OTCM 37082)
M123C—Standard A (OTCM 37082)
M123D—Standard B (OTCM 37215)

CHARACTERISTICS

Crew	2
Weight:	
Net	32,250 lb
Payload:	
Off highway	30,000 lb
On highway	35,000 lb
Gross:	
Off highway	62,250 lb
On highway	67,250 lb
Axle gear ratio (rear)	9.02:1.00
Axle load:	
Empty:	
Front	13,600 lb
Bogie	18,650 lb
Loaded:	
Off highway:	
Front	14,920 lb
Bogie	47,330 lb
On highway:	
Front	15,140 lb
Bogie	52,110 lb
Tires:	
Size	14.00 x 24
Ply	20
Pressure:	
Highway	55 psi
Cross-country	35 psi
Sand	15 psi
Ground clearance	15⅝ in.
Pintle height, empty	55½ in.
Fuel octane rating (minimum)	72
Capacities:	
Fuel (two tanks)	166 gal
Cooling system	66 qt
Crankcase and oil filter	23 qt
Transmission	22 pt
Transfer	20 pt
Winch:	
Oil capacity (each)	3½ pt
Load capacity (each)	45,000 lb
Electrical system:	
Potential	24 volts
Number of batteries	2 (12 volts)
Type of ground	negative
Brakes:	
Manufacturer	Mack
Parking brake, type	internal expanding
Engine:	
Manufacturer	Le Roi, Model T-H844
Type	gasoline, valve-in-head
Number of cylinders (V-type)	8
Displacement	844 cu in.
Bore	5¼ in.
Stroke	4⅞ in.
Compression ratio	6.7:1
Governed speed:	
Full load	2,600 rpm
Brake horsepower (max w/std accessories)	286 at 2,600
Transmission:	
Type	selective constant mesh
Forward speeds	5
Gear ratio:	
High range:	
High	1.00:1
Low	7.58:1
Low range:	
High	18.88:1
Low	22.50:1

PERFORMANCE

Computed grade ability in lowest gear, loaded	60 percent
Fuel consumption, loaded	1.8 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	42 mph
Maximum towed load allowance:	
Off highway	80,000 lb
On highway	135,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-2320-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	280 in.
Width	114 in.
Height	113 in.
Volume	1,962 cu ft
Area	221 sq ft
Gross weight	28,775 lb
Ship tons	49.05

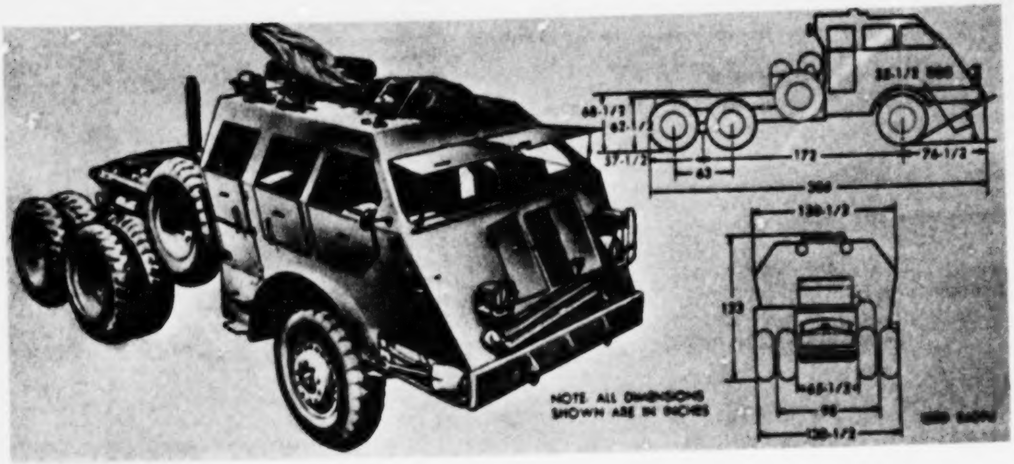
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8003-1, TM 9-8003-2, TM 9-2320-206-12, SNL G-792, TM 9-2920-210-34, TM 9-1828A, TM 9-1837A, TM 9-1837B, TM 9-1827A, TM 9-1827C, TM 9-8615, TM 9-1825B, TM 9-8627, TM 9-8647, LO 9-2320-206-10.

TRUCK, TRACTOR: 12-TON, 6 X 6, M26A1



Major item

Model	***Line item No.***	***Federal stock No.***
M26A1, w/wn	4-61640-20	2320-835-8288

General

TRUCK, TRACTOR: 12-ton, 6 x 6 M26A1 tows semitrailers, 45-ton and 50-ton, 8-wheel transporters M15A1 and M15A2 as components of truck-trailer, 40 ton, tank recovery M25, for recovery and transportation of damaged tanks and materiel weighing up to 100,000 pounds. It is a self-propelled motor vehicle powered by a 6-cylinder internal combustion gasoline engine. There are two front and four rear dual wheels equipped with desert, or combat type, pneumatic tires.

The rear wheels are driven by roller type chains operating on sprockets fastened to the wheel hubs.

The tractor can be used as a recovery vehicle without the semitrailer, since it is equipped with a front mounting winch, a rear tandem winch, and a vertical lifting device. The cab is softtop.

Data plate location:

The data plate is located on the right side of the instrument panel.

Classification:

M26A—Standard B (OTCM 37119)

CHARACTERISTICS

Crew	7
Weight:	
Net	48,895 lb
Payload:	
On fifth wheel	60,000 lb
Gross	108,895 lb
Live axle gear ratio	7.69:1
Axle load:	
Empty:	
Front	22,950 lb
Rear	25,945 lb
Loaded	
Front	22,950 lb
Rear	85,945 lb
Tires:	
Size	14 x 24
Ply	20
Pressure:	
Highway	90 psi
Cross-country	
Sand	
Tread, center-to-center, front	82 in
Ground clearance	18 in.
Pintle height, loaded	39 in.
Center of fifth wheel to center of jackshaft	4 in.
Height to center of fifth wheel	68½ in:
Height of rear of fifth wheel	62½ in.
Fuel octane rating	72
Capacities:	
Fuel	120 gal
Cooling system	56 qt
Crankcase, refill	28 qt
Transmission:	
Main	8½ qt
Auxiliary	10 qt
Transfer	2½ qt
Axles:	
Front	20 qt
Rear	4 qt
Steering gear	8½ qt
Winch:	
Oil capacity, each	4 qt
Load capacity:	
Front	35,000 lb
Rear (2 each)	60,000 lb
Chain oilers	20 qt
Hydraulic steering	10 qt
Electrical system:	
Potential	12 volts
Number of batteries	2 (6 volt)
Type of ground	negative
Engine:	
Manufacturer	Hall Scott
Model	440
Type	valve-in-head, 4 cycle
Number of cylinders	(in line) 6
Displacement	1,090 cu in.
Bore	5¾ in.
Stroke	7 in.
Compression ratio	5.7:1
Governed speed	2,000 rpm
Brake horsepower (max w/std accessories)	240 at 2,000 rpm
Torque (max w/std accessories)	810 lb-ft at 1,200 rpm
Transmission:	
Type	constant-mesh
Forward speeds	4
Gear ratio:	
High	1:1
Low	5.55:1

CHARACTERISTICS—Continued

Auxiliary transmission speeds	3
Transfer:	
Speeds	1
Gear ratio	1.91:1

PERFORMANCE

Computed grade ability in lowest gear, loaded	30 percent
Turning radius	40 ft
Fording depth	56 in.
Fuel consumption, w/towed load	1 mpg
Cruising range, w/towed load	120 mi.
Allowable speed, governed	28 mph
Maximum semitrailer, gross	117,500 lb

EQUIPMENT

Basic Issue Items: See TM 9-767

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

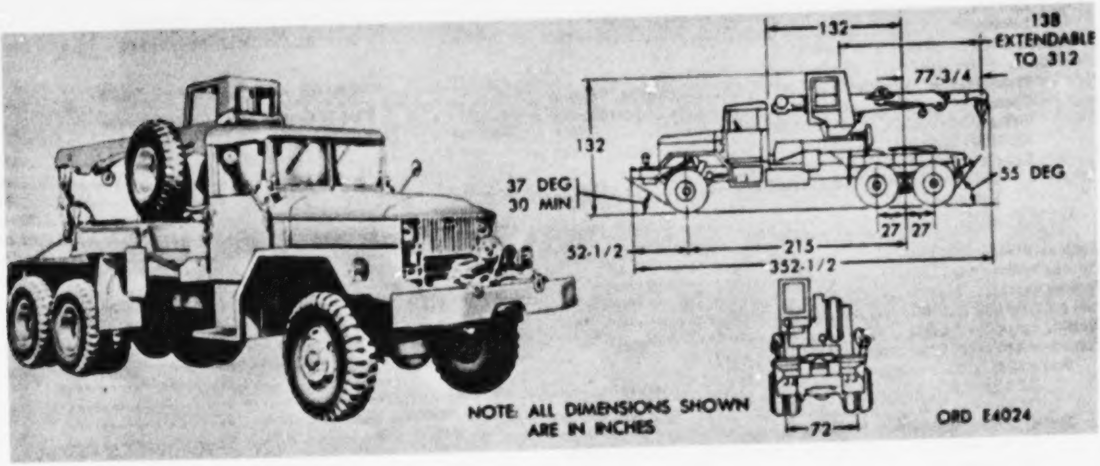
Shipped	
Length	306 in.
Width	130⅛ in.
Height	123 in.
Volume	2,957 cu ft
Area	276 sq ft
Gross weight	
Ship tons	73.93

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-767, SNL G-160.

TRUCK, TRACTOR, WRECKER: 5-TON, 6 X 6, M246, W/WINCH, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M246	4–61760–00	2320–835–8639

General

TRUCK, TRACTOR, WRECKER: 5-ton, 6 x 6, M246, w/wn, w/e, is used to salvage crashed aircraft and to perform general towing. The wrecker tractor truck M246 consists essentially of truck chassis M63C and the hydraulically-powered crane which is mounted on the rear of chassis M63C. The six-wheel truck M246 is equipped with one driving front axle and two driving rear axles. The crane has a three position extendable boom. Boom jacks are provided for support of the boom when lifting.

Differences among models

Data plate location

The identification plate is mounted on the instrument panel to the right of the instrument cluster.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight:	
Net (w/winch)	32,830 lb
Payload:	
On highway	16,000 lb
Off highway	12,000 lb
Gross:	
On highway	48,830 lb
Off highway	44,830 lb
Length (overall)	352 in.
Width (overall)	98 in.
Height:	
Maximum	132 in.
Reducible to	89 in.
Ground clearance	11 in.
Capacities:	
Cooling system	44 qt
Crankcase (dry fill)	22 qt
Differentials (each)	12 qt
Fuel tank	78 gal
Transfer case	5¼ qt
Transmission:	
w/power takeoff	11 qt
w/o power takeoff	9 qt
Winch:	
Front	2.6 qt
Rear	3 qt

Engine:	
Manufacturer	Continental
Type	6-cylinder, valve-in-head
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in
Compression ratio	6.4:1
Governed speed:	
No load (max)	2,950 rpm
Full load (max)	2,800 rpm
Brake horsepower (max w/std accessories)	196@2,800 rpm
Torque (max)	480 lb-ft@2,800 rpm
Electrical system:	
Starter:	
Manufacturer	Delco Remy
Voltage	24
Distributor:	
Manufacturer	Delco Remy
Voltage	24
Generator:	
Manufacturer	Delco Remy
Voltage	24
Battery:	
Manufacturer	Delco Remy
Voltage	12
Plates per cell	23
Number of batteries	2
Type of ground	negative
Tires:	
Ply	12
Size	11.00 x 20
Pressure:	
Highway	75 psi
Cross-country	35 psi
Mud, sand, snow	15 psi
Transmission:	
Manufacturer	Spicer
Type	synchromesh
Transfer:	
Manufacturer	Timken
Speed	2
Gear ratio:	
Rear output shaft:	
Low range	2.024:1.00
High range	1.00:1.00
Front output shaft:	
Low range	2.163:1.00
High range	1.068:1.00

CHARACTERISTICS—Continued

Transfer—Continued	
Pintle height (rear):	
Empty	31⅝ in.
Loaded	30⅝ in.
Loading height, empty (fifth wheel)	57 in.
Crane:	
Manufacturer	Austin-Western
Operation	hydraulically
Swing	360°
Elevation (approx)	45°
Length of boom:	
Retracted	138 in.
Extended	312 in.

PERFORMANCE

Grade ability in lowest gear	47.62 percent
Turning radius (max)	47 ft
Fording depth	30 in.
Fuel consumption (loaded)	4.44 mpg
Cruising range (loaded @30 mph)	229m i.
Recommended towed load, gross (max):	
Semitrailer (gross weight):	
Off highway	37,500 lb
On highway	46,000 lb
Trailer (gross weight) (max pintle tow):	
Off highway	20,000 lb
On highway	30,000 lb

EQUIPMENT

Basic Issue Items: See TM 9–8028.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

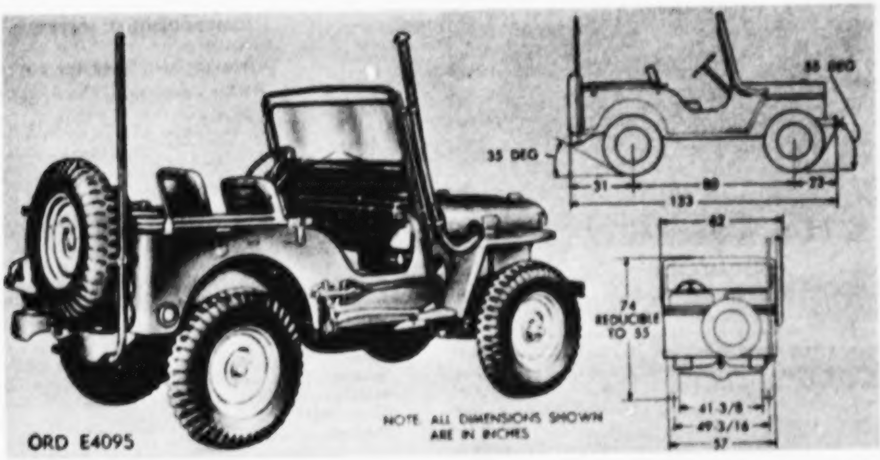
Shipped	
Length	352 in.
Width	98 in.
Height	89 in.
Volume	1,780 cu ft
Gross weight	32,880 lb
Ship tons	44.50

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–8028, TM 9–2320–211–20P, SNL G–744, LO 9–8028.

TRUCK, UTILITY: ¼-TON 4 X 4 M38, W/E



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Major item

Model	*Line item No.*	*Federal stock No.*
M38, w/winch	4-61791-30	2320-835-8317
M38, w/o winch	4-61790-30	2320-835-8318

General

TRUCK, UTILITY: ¼-ton, 4 x 4, M38, w/e, is equipped with one front axle and one rear axle, with four driving wheels. The design of this vehicle locates the four-cylinder gasoline engine forward of the driving compartment under the hood, and provides a four-passenger open-type body.

The vehicle is used as a general purpose personnel or cargo carrier especially designed for adaptation to general reconnaissance, command, communications, or other special duties.

The spare wheel and tire are mounted on the rear of the body. Power for the vehicle is supplied by 4-cylinder gasoline engine, mounted on cushion mounts on the frame.

The conventional three-speed, selective-gear transmission is mounted directly to the rear of the engine and clutch assemblies.

Current is generated by a 24-volt, belt-driven generator, and stored in two 12-volt storage batteries.

The vehicle uses military nondirectional mud and snow tires.

Differences among models

Data plate location: The identification plate is located on the instrument panel at the right of the instrument cluster.

Classification: Standard C (OTCM 37197).

CHARACTERISTICS

Crew	2
Passengers (including crew)	4
Weight:	
Net	2,750 lb
Payload:	
Off highway	800 lb
On highway	1,200 lb
Gross:	
Off highway	3,550 lb
On highway	3,950 lb
Live-axle gear ratio	5.38:1
Axle load:	
Empty:	
Front	1,482 lb
Rear	1,268 lb
Loaded:	
Off highway:	
Front	1,595 lb
Rear	1,955 lb
On highway:	
Front	1,595 lb
Rear	2,355 lb
Tires:	
Size	7:00 x 16
Ply	6
Pressure:	
Highway	25 psi
Cross-country	25 psi
Sand, mud, or snow	10 psi
Off highway	25 psi
Tread, center-to-center, front	49⅛ in.
Ground clearance (minimum, rear axle)	9¼ in.
Pintle height, (rear) empty	20 in.
Fuel octane rating	68
Capacities:	
Fuel	13 gal
Cooling system	11½ qt
Crankcase, refill	4 qt
Transmission	2 pt
Transfer	3 pt
Axles:	
Front	1¼ qt
Rear	1⅝ qt
Winch:	
Oil capacity	2 pt
Load capacity	3,500 lb
Electrical system:	
Potential	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Wagner-Lockheed
Type	hydraulic
Parking brake, type	transmission
Engine:	
Manufacturer	Willys Model MC
Type	L-head, 4-cycle
Number of cylinders	(in line) 4
Displacement	134.2 cu in.
Bore	3.125 in.
Stroke	4.375
Compression ratio	6.48:1

CHARACTERISTICS—Continued

Engine—Continued	
Governed speed	not governed
Brake horsepower (max w/std accessories)	60 at 4,000 rpm
Torque (max)	105 lb-ft at 2,000 rpm
Transmission:	
Type	synchromesh
Forward speeds	3
Gear ratio:	
High	1:1
Low	2.80:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	2.43:1

PERFORMANCE

Computed grade ability in lowest gear, loaded	65 percent
Turning radius:	
Right	20 ft
Left	19 ft
Fording depth	74 in.
Fuel consumption, loaded	225 mi
Cruising range, recommended	55 mph
Maximum recommended towed load, gross:	
Off highway	1,500 lb
On highway	2,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8012.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

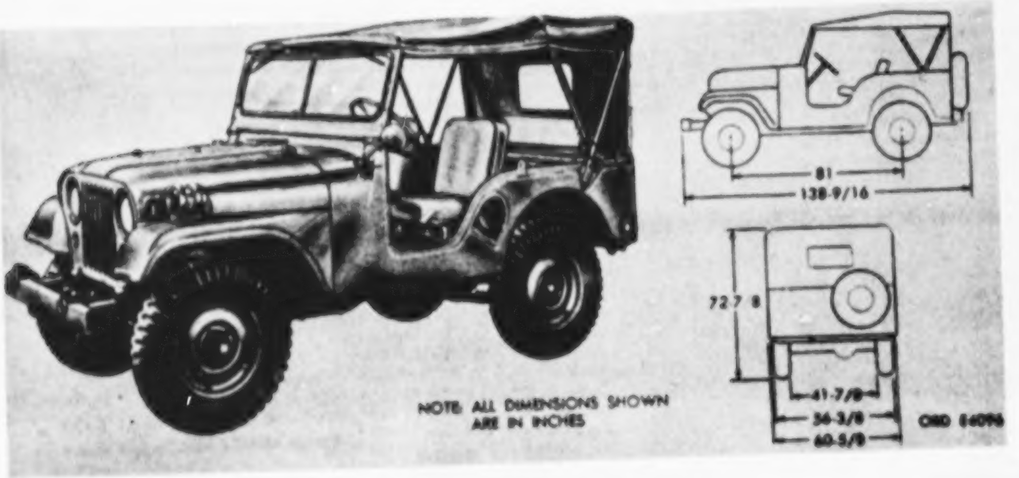
Shipped	
Length	133 in.
Width	62 in.
Height	55 in.
Volume	262 cu ft
Area	57 sq ft
Gross weight	2,625 lb
Ship tons	6.55

Outside Continental United States

Shipped	
Length	137 in.
Width	65¼ in.
Height	44½ in.
Volume	235 cu ft
Area	62 sq ft
Gross weight	3,713 lb
Ship tons	5.88

References: TM 9-8012, SNL G-740, LO 9-8012.

TRUCK, UTILITY: ¼-TON, 4 X 4, M38A1 AND M38A1C, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M38A1, w/o winch	4-61790-35	2320-835-8319
M38A1, w/winch	4-61791-40	2320-835-8320
M38A1C, w/o winch	4-61793-00	2320-141-8841
M38A1C, w/winch	4-61794-00	2320-141-8842

General

TRUCK, UTILITY: ¼-ton, 4 x 4, M38A1 and M38A1C, w/e is used to transport command, reconnaissance personnel, and light cargo (M38A1 when modified for mounting the RIFLE, 105 MILLIMETER: M27 or M27A1 is referred to as the M38A1C). Power is supplied by an F-head, 4-cylinder, 4-cycle, water-cooled, gasoline-type engine. The transmission has three forward speeds and one reverse speed, all manually selected by means of the gearshift lever. The transfer is a two-speed unit driven by the transmission and distributes power to the front and rear axles through propeller shafts. The front axle is a full-floating, single reduction type equipped with a conventional differential with hypoid drive gears. The front suspension consists of two semi-elliptic-type leaf springs. The rear axle is a semifloating, single-reduction-type equipped with a conventional differential with hypoid drive gears. The rear suspension consists of two semielliptic-type leaf springs. The service brake system is hydraulically actuated. The mechanical handbrake system serves primarily as a parking brake. The electrical system is a 24-volt submersible-type equipped with two 12-volt lead-and-acid type batteries connected in series.

Differences among models

The utility truck M38A1C has a split windshield to provide space for the stowage of the 105-mm rifle when it is not in use. The truck M38A1C also has its rear seat removed to provide space for mount M75 or M75A1 which supports rifle M27 or M27A1, respectively. The spare tire of truck M38A1C is mounted on the right front side while the spare tire of truck M38A1 is mounted on the rear of the vehicle. Racks for ammunition are provided under mount M75 or M75A1, and a tailgate covers the ammunition compartment of the truck M38A1C.

Data plate location: The identification plate is fastened to the right side of the instrument panel.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Weight of vehicle: .... 2,665 lb
  Net........................
  Payload: .... 1,200 lb
    Highway........................ 800 lb
    Cross-country........................
  Gross: .... 3,865 lb
    Highway........................ 3,465 lb
    Cross-country........................ 138 9/16 in.
Length (overall)........................ 60 5/8 in.
Width (overall)........................

Height: .... 73 in.
  Overall (max)........................ 56¼ in.
  Lowest operable (over steering wheel)........................ 9¼ in.
Ground clearance........................

Capacities: .... 11½ qt
  Cooling system........................ 4½ qt
  Crankcase (refill)........................ 2½ qt
  Differential (each)........................ 17 gal
  Fuel tank........................ 1 qt
  Transmission........................ 3 pt
  Transfer........................

Engine: .... Willys
  Manufacturer........................ F-head 4-cycle
  Type........................ 4
  Cylinders........................ 134.2 cu in.
  Displacement........................ 3⅛ in.
  Bore........................ 4⅜ in.
  Stroke 7.4:1
  Compression ratio........................ 72@4,000 rpm
  Brake horsepower (max w/std access.)........................ 114 lb-ft@2,000 rpm
  Torque (max)........................

Electrical system: 2
  Number of batteries........................ negative
  Type of ground........................ 24
  Voltage........................
  Distributor w/coil assembly: .... Auto-Lite
    Manufacturer........................ 24
    Voltage........................
  Ignition coil: .... Auto-Lite
    Manufacturer........................ CT4002
    Model........................ 24
    Voltage........................
  Spark plugs: 8357724
    Ordnance number........................ 14-mm
    Thread size........................
Starter: .... Delco-Remy or Auto-Lite
  Manufacturer........................ DR-X10483 or MC1-4001UT
  Model........................ 24
  Voltage........................ over-running clutch
  Drive........................

CHARACTERISTICS—Continued

Generator:	
Manufacturer	Delco-Remy or Auto-Lite
Model	DR-117495 or AL-GHA4802UT
Voltage	24
Generator regulator:	
Manufacturer	Delco-Remy or Auto-Lite
Model	DR-118606 or AL-VBC4002UT
Voltage	24
Battery:	
Manufacturer	Auto-Lite
Model	2HH
Voltage	12
Transmission:	
Manufacturer	Borg-Warner Corp, Warner Gear Division
Type	synchromesh
Forward speeds	3
Gear ratio:	
High	1:1
Low	2.80:1
Transfer:	
Manufacturer	Spicer Mfg. Corp
Speeds	2
Gear ratio:	
High	1:1
Low	2.43:1
Brake system:	
Service brakes:	
Type	hydraulic
Size	9 x $1\frac{3}{4}$ in.
Fluid capacity	$\frac{1}{2}$ pt
Master cylinder:	
Type	reservoir and cylinder
Size:	
Front	1 in.
Rear	$\frac{3}{4}$ in.
Brakeshoes:	
Lining length:	
Forward shoe	$10\frac{7}{16}$ in.
Rear shoe	$6\frac{15}{16}$ in.
Width	$1\frac{3}{4}$ in.
Thickness	$\frac{7}{16}$ in.
Hand brake:	
Type	mechanical, internal-external clamping
Width	$1\frac{1}{2}$ in.
Thickness	$\frac{3}{16}$ in.

PERFORMANCE

Grade ability (computed) in loaded gear, loaded	69 percent
Turning radius:	
Right	232 in.
Left	228 in.
Fording depth:	
w/kit	70 in.
w/o kit	$37\frac{1}{2}$ in.
Fuel consumption, loaded	20 mpg
Cruising range, loaded	280 mi
Allowable speed, recommended	55 mph
Towed load, recommended (max):	
Off highway (gross)	1,500 lb
On highway (gross)	2,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8014.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

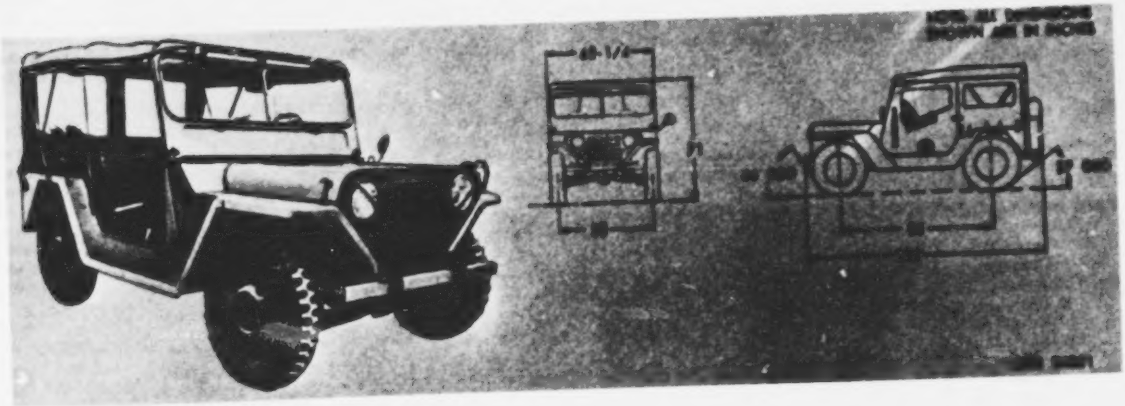
Shipped	
Length	135 in.
Width	60 in.
Height	55 in.
Volume	258 cu ft
Gross weight	2,180 lb
Ship tons	6.45

Outside Continental United States

Shipped	
Length	$145\frac{1}{2}$ in.
Width	67 in.
Height	$48\frac{1}{2}$ in.
Volume	273 cu ft
Gross weight	4,333 lb
Ship tons	6.83

References: TM 9-8014, TM 9-2330-208-20P, SNL G-758, LO 9-8014.

TRUCK, UTILITY: ¼-TON, 4 X 4, M151, W/E



Major item

Model	***Line item No.***	***Federal stock No.***
M151	4-61790-01	2320-542-4783

General

TRUCK, UTILITY: ¼-ton, 4 x 4, M151, w/e is a general purpose personnel or cargo-type carrier which is used over all types of roads as well as cross-country terrain. The utility truck M151 will ford hard bottom water crossings to a depth of 21 inches, and with the addition of certain special equipment it will ford hard bottom water crossings to a depth of five feet and will operate in arctic zones.

The truck M151 is powered by a four-cylinder overhead valve, in line, liquid cooled, gasoline engine, located forward of the passenger compartment under the hood. A four-speed conventional type synchromesh transmission with transfer case transmits power to the front and rear axles. Service brakes are hydraulic. All wheels have individual suspension utilizing coil springs.

The body and frame are integral, all steel welded construction, providing space for four men and equipment including driver. The windshield can be folded forward to lie flat on the hood for a low silhouette. The body can be inclosed with removable canvas top, side curtains, and doors. Space is provided in and on the body for storage of equipment.

The spare tire and wheel is mounted on the rear panel, right-hand side. A pintle hook is provided at the rear and lifting eyes at the front and rear to permit towing or lifting the vehicle.

Differences among models

Data plate location: The identification plate is fastened to the transmission housing cover.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Crew	1
Passengers, including crew	4
Weight:	
Net	2,273 lb
Payload:	
Improved road	1,200 lb
Cross-country	800 lb
Gross:	
Improved road	3,473 lb
Cross-country	3,073 lb
Length (overall)	132.0 in
Width (overall)	63.0 in
Height, with top (overall) (empty)	71.0 in
Height, lowest operable (empty)	52.5 in.
Ground clearance (min) (empty)	10.3 in.
Capacities:	
Gasoline tank	17.7 gal
Crankcase oil (w/o filter)	4 qt
Crankcase oil (w/filter)	5 qt
Cooling system	8 qt
Engine:	
Design	Ordnance
Cylinders	4
Displacement	141.5 cu in.
Compression ratio	7.5 to 1
Horsepower @60° F. air	71 @4,000 rpm
Torque ft-lb @60° F. air	128 @1,800 rpm
Fuel	gasoline
Firing order	1-3-4-2
Valve arrangement	overhead
Carburetor:	
Type	single barrel, side draft
Choke	manual
Fan belts:	
Number	2
Type	V-wedge
Width	0.38 in.
Fuel system:	
Air cleaner	oil bath
Fuel filter	impregnated paper
Fuel pump	electric
Electrical system:	
Batteries:	
Number	2
Type	2 HN
Ampere-hour capacity	45 @ 20 hr rate
Voltage	12
Terminal grounded	negative
Generator:	
Manufacturer	Autolite, Delco-Remy
Type	Shunt wound
Rating	25 amp
Voltage	24
Generator regulator:	
Manufacturer	Autolite
Current limit	25 amp
Voltage limit	28.3 @ 70°
Ignition distributor:	
Manufacturer	Autolite
Type of advance	centrifugal
Contact gap	0.020 in.
Ignition coil voltage	24

CHARACTERISTICS—Continued

Electrical system—Continued	
Spark plugs:	
Size	14-mm
Gap	0.029–0.032 in.
Starter motor:	
Manufacturer	Autolite
Type	series wound
Voltage	24
Cooling system:	
Radiator fillercap (spring pressure)	7 psi
Thermostat:	
Opening range	180° to 202° F.
Type	spring and cartridge
Power train:	
Clutch:	
Type	Single, dry disc
Diameter	8½ in.
Transmission:	
Type	selective synchromesh
Speeds	four forward; one reverse
Transfer	single speed
Tires:	
Number	5
Type	lightweight, nylon cord
Tread	non-directional, cross-country
Size	7.00 x 16
Ply	4 (6 ply rating)
Pressures:	

	Front	*Rear*
Highway	20 lb	25 lb
Cross-country	18 lb	22 lb
Mud, sand, snow	12 lb	18 lb

Wheels:	
Number of mounting studs	5
Material	magnesium alloy
Type	drop center (safety rim)
Suspension:	
Type	independent, 4-wheel
Spring	coil
Front shock absorbers:	
Type	hydraulic, telescopic
Action	two-way direct (jounce and rebound control)
Stops	internal hydraulic jounce and rebound
Rear shock absorbers:	
Type	hydraulic, telescopic
Action	two-way direct (jounce and rebound control)
Stops	internal hydraulic rebound external jounce
Brakes:	
Service brakes:	
Type	hydraulic
Diameter	9.125 in.
Width	2.00 in.
Master cylinder (type)	reservoir and cylinder
Parking brake (type)	mechanical, drum and band

PERFORMANCE

Speeds (max permissible):	
4th gear	66 mph
3d gear	40 mph
2d gear	21 mph
1st gear	11 mph
Reverse	9 mph
Cruising range, approx (highway w/o towed load)	300 mi
Turning radius (to centerline of outermost wheel tread)	$214\frac{15}{16}$ in.
Fording depth (w/o special equipment)	21 in.

EQUIPMENT

Basic Issue Items: See TM 9–2320–218–10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

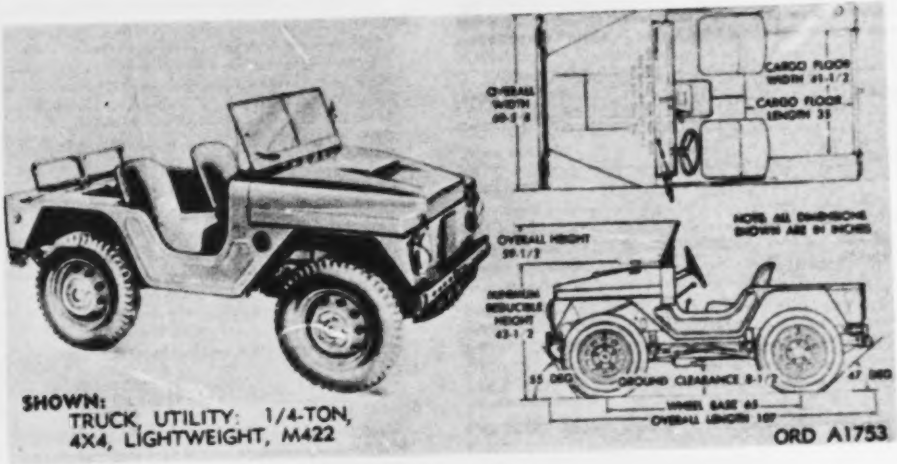
Shipped	
Length	132 in.
Width	63 in.
Height	52.5 in.
Volume	253 cu ft
Gross weight	2,273 lb
Ship tons	6.32

Outside Continental United States

Shipped	
Length	132 in.
Width	63 in.
Height	53 in.
Volume	255 cu ft
Gross weight	2,300 lb
Ship tons	6.37

References: TM 9–2320–218–10, TM 9–2320–218–20 and 20P, TM 9–2320–218–34 and 34P, TM 9–2520–230–34 and 34P, TM 9–2520–231–34 and 34P, TM 9–2805–213–34 and 34P, TM 9–2910–206–34 and 34P, TM 9–2920–209–34 and 34P, TM 9–2920–210–34, TM 9–2920–211–34 and 34P, TM 9–2920–22–34 and 34P, LO 9–2320–218–10.

TRUCK, UTILITY: ¼-TON, 4 X 4, LIGHTWEIGHT, M422 AND M422A1



SHOWN:
TRUCK, UTILITY: 1/4-TON,
4X4, LIGHTWEIGHT, M422

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	Major item	
Model	***Line item No.***	***Federal stock No.***
M422		2320-546-3099
M422A1		2320-753-0103

General

TRUCK, UTILITY: ¼-ton, 4 x 4, lightweight, M422 or M422A1, is designed as a general purpose personnel and/or cargo carrier, easily adaptable for communications or reconnaissance or other diversified uses. The vehicle is capable of operation on all types of highways, roads, and terrain.

Fording operations to a maximum depth of 21 inches may be accomplished without the use of a deep water fording kit, and to a depth of 60 inches with deepwater fording kit.

The vehicle is powered by a 4-cylinder, V-type, air-cooled, gasoline engine. Power is transmitted by a manually-selected transmission, with four forward speeds and one reverse speed. Transfer gear selection of either 2-wheel drive (rear) or 4-wheel (front and rear) is accomplished manually by the operator.

The body is an all aluminum, unit-welded, body and fender structure. It is insulated from the steel frame by body mounting shims and cushions between the body and frame.

Differences among models

The overall length of M422 is 107 inches and of M422A1 is 113 inches.

Data plate location: For location of identification plates, refer to TM 9-2320-225-10.

Classification: M422......Standard A (OTCM) (For Marine Corps use only)
M422A1....Unassigned

CHARACTERISTICS

Crew	1
Passengers, including crew	4
Weight:	
Net, w/o winch	1,700 lb
Payload:	
Off highway	850 lb
On highway	1,000 lb
Gross:	
Off highway:	
M422	2,550 lb
M422A1	2,630 lb
On highway:	
M422	2,700 lb
M422A1	2,780 lb
Live-axle gear ratio (front and rear)	5.375:1
Axle load:	
Empty, w/o winch:	
Front	1,036 lb
Rear	664 lb
Tires:	
Size	6.00 x 16
Ply	(6 ply rating) 4
Pressure:	
Highway:	
Front	20 psi
Rear	25 psi
Cross country:	
Front	18 psi
Rear	22 psi
Mud and snow:	
Front	12 psi
Rear	18 psi
Tread design	NDCC
Tread, center-to-center, front and rear	52 in.
Ground clearance	8.5 in.
Pintle height, loaded	14.45 in.
Angle of approach	55°
Angle of departure	47°
Turning radius	15 ft, 8 in.
Electrical system:	
Potential	24 volts
Number of batteries	2
Type of batteries ORD 2HN (12 volts)	MS-35000-1
Generator	25 amp
Fuel octane rating	80
Capacities:	
Fuel	13 gal
Crankcase, refill	4 qt
Transmission	2.75 pt
Transfer	3.10 pt
Axles: Spicer (single reduction hypoid)	
Front	2.3 pt
Rear	2.3 pt
Engine:	
Manufacturer	American Motors, Model AV-108-4
Type	air-cooled, 4 cycle
Displacement	107.8 cu in.
Bore	3.25 in.
Stroke	3.25 in.
Compression ratio	7.5:1

CHARACTERISTICS—Continued

Engine—Continued	
Governed speed	3,600 rpm
Brake horsepower, gross (max w/std accessories)	55 @ 3,600 rpm
Torque, gross (max w/std accessories)	90 lb-ft @ 2,500 rpm
Brakes:	
Service:	
Manufacturer	Bendix
Type	Internal, 2-shoe
Parking:	
Manufacturer	Bendix
Type	rear, 2-shoe
Transmission:	
Manufacturer	New Process, Model 4300
Type	synchromesh on 2d, 3d, and 4th gears
Number of speeds	4 forward, 1 reverse
Gear ratio:	
First	5.24:1
Second	3.06:1
Third	1.77:1
Fourth	1:1
Reverse	5.24:1
Transfer:	
Manufacturer	New Process, Model 4300
Number of speeds	1
Gear ratio	1.085:1

PERFORMANCE

Maximum grade ability (lowest gear with off highway load)	60 percent
Fording depth:	
W/o fording kit	21 in.
W/fording kit	60 in.
Fuel consumption (loaded)	19.25 mpg
Cruising range (loaded)	225 mi
Allowable speed (governed) @ 3,600 rpm	62 mph
Maximum allowable towed load:	
Cross-country	1,000 lb
Highway	1,500 lb

EQUIPMENT

Basic Issue Items: See TM 9-2320-225-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M422:

Within Continental United States

Shipped	
Length	107 in.
Width	60⅝ in.
Height	43½ in.
Volume	165 cu ft
Area	45 sq ft
Gross weight	1,700 lb
Ship tons	4.12

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross Weight	
Ship tons	

M422A1:

Within Continental United States

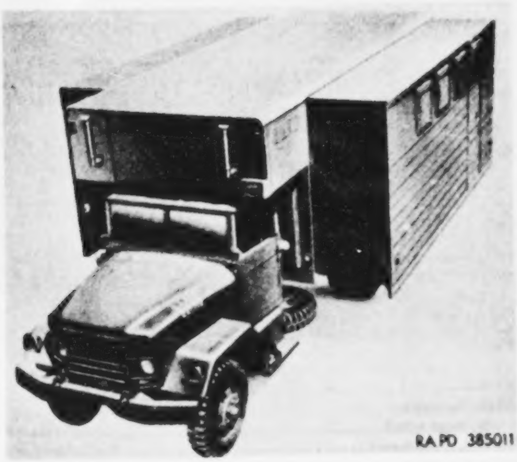
Shipped	
Length	118 in.
Width	60⅝ in.
Height	45 in.
Volume	179 cu ft
Area	47.5 sq ft
Gross weight	1,780 lb
Ship tons	4.42

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-848, LO 9-2320-225-10; TM 9-2320-225-10, 20, 35; TM 9-2520-237-35; TM 9-2520-242-35; TM 9-2805-217-35; TM 9-2910-206-35; TM 9-2910-209-35; TM 9-2920-214-35; TM 9-2920-215-35; TM 9-2920-216-35.

TRUCK, VAN, EXPANSIBLE, 2½-TON, 6 X 6, M292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Major item

Model	*Line item No.*	*Federal stock No.*
M292 w/e	4-61828-10	2320-325-6574
M292 w/wn, w/e	4-61829-01	2320-542-4444

General

TRUCK, VAN, EXPANSIBLE, 2½-ton, 6 x 6, M292, is intended primarily to provide a vehicle for housing and transporting various bulky technical equipment which cannot be mounted in nonexpansible vans with sufficient space remaining to accommodate operating personnel. A secondary purpose is to provide a basic vehicle for office and quarters for general officers, which require sufficient space for conferences of ten or more persons. Van body has four doors, two located in rear and one each side. Van body has ten windows, four on each side and one in each rear door. Van body is aluminum and insulated.

It has interior electric outlets on 110/208-volt ac current.

Cab is of conventional open type for three persons.

Differences among models

The winch equipped truck, van, has somewhat longer overall length.

Data plate location: An identification plate is mounted on the instrument panel.

Classification:	
M292 w/e	Standard A (OTCM 36841)
M292 w/wn, w/e	standard

CHARACTERISTICS

Weight:	
W/o front winch	
W/front winch	25,090 lb
Length:	
W/o front winch	
W/front winch	28 ft
Engine:	
Fuel	gasoline
Cylinders	6
Max hp at 3,400 rpm	127
Transmission:	
Type	Manual
Speeds:	
Forward	5
Reverse	1
Transfer transmission:	
Speeds	2
Front axle:	
Engagement	automatic
Rear axle data:	
Drivers, conventional	2
Type	single speed
Rear wheels:	
Duals	4
Brakes:	
Service	air-hydraulic
Parking	2
Power takeoff	1
Electrical data:	
Starting	24v
Ignition and light	24v
Underwater fording:	
Sealed system	yes
Towing:	
Pintle hook	yes
Expansible body:	
Retracted:	
Overall width	96 in.
Inside width	80 in.
Expanded:	
Overall width	168 in.
Inside width	160 in.
Ventilation	electric fan
Air conditioning	yes
Heating and cooling system	yes
Tires:	
Size	
Pressure	

PERFORMANCE

Approach angle w/winch	39°
Departure angle	26°
Turning radius w/winch	
Towed load:	
Cross-country	6,000 lb
Highway	10,000 lb

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

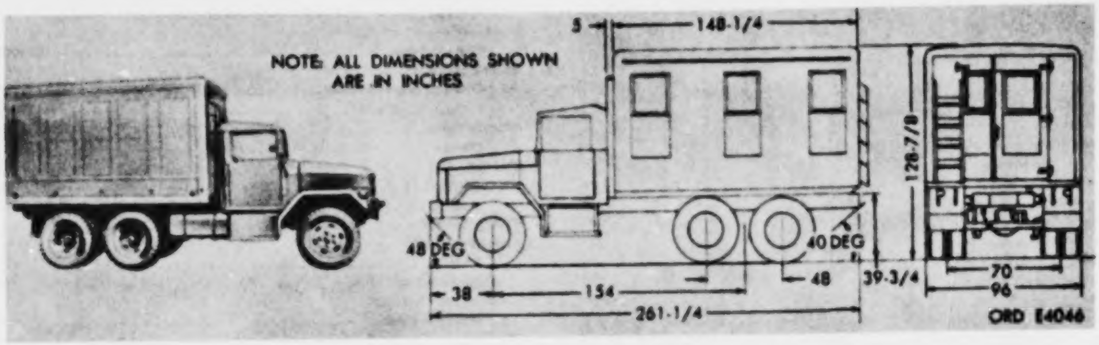
Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2320-209-20P, TM 9-2920-210-34, TM 9-1828A, TM 9-8647, TM 9-8615, TM 9-8623, TM 9-8601.

TRUCK, VAN: SHOP, 2½-TON, 6 X 6, M109, M109A1, M109C, AND M109D, W/E



Model	*Line item No.*	*Federal stock No.*
M109, w/winch	4-61836-25	2320-289-6473
M109, w/o winch	4-61834-25	2320-835-8515
M109, w/winch		2320-706-2225
M109A1, w/o winch	4-61834-26	2320-690-8365
M109A1, w/winch		2320-706-2222
M109C, w/o winch	4-61834-27	2320-030-2120
M109A1, w/o winch		2320-706-2223
M109D, w/o winch		2320-705-8941
M109A1, w/winch	4-61836-30	2320-706-2224

General

TRUCK, VAN: Shop 2½-ton, 6 x 6, M109, M109A1, M109C, and M109D, provides mobile facilities for maintenance and repair for various services. The shop van truck consists of the chassis M45 and a 12-foot van body. The body is wired for 24-volt-dc and 115-volt-ac power. Lift rings, by which completely loaded body may be lifted, are installed at upper corners. Heating and ventilating accessories are available to provide satisfactory working conditions in temperatures from +125° F. to —25° F. The body is waterproof for fording to a depth of 8 feet. All M109 vehicles are equipped with hard top cab inclosure, have 154-inch wheelbase, and 9 x 20 dual tires.

Differences among models

Hard top cab:	
M109, w/o winch	2320-706-2226
M109, w/winch	2320-706-2225
M109A1, w/winch	2329-706-2222
M109A1, w/o winch	2320-706-2223
Soft top cab:	
M109A1, w/o winch	2320-690-8365
M109A1, w/winch	2320-706-2224

Data plate location: The identification plate (nameplate) is fastened to the instrument panel to the right of the instrument cluster.

Classifica.ion: M109—Standard B (OTCM 36841)
M109A1—Standard A (OTCM 36876)
M109, w/winch—Standard B (OTCM 36841)
M109C, w/o winch—Standard B (OTCM 36876)
M109D, w/o winch—Standard B (OTCM 36876)

CHARACTERISTICS

Crew	2
Weight:	
Net:	
W/o front winch	15,231 lb
W/front winch	15,646 lb
Payload:	
Cross-country	5,350 lb
Highway	5,350 lb
Gross	20,581 lb
Length (overall):	
W/front winch	277 in.
W/o front winch	263 in.
Width (overall)	99 in.
Height (overall) (empty, as supplied for travel)	130 in.
Pintle height (empty)	34 in.
Ground clearance	12¾ in.
Capacities:	
Cooling system	22 qt
Crankcase (refill)	9 qt
Differentials (each)	7 qt
Fuel tank	50 gal
Transmission:	
W/o transmission power take-off	8½ pt
W/transmission power take-off	10½ pt
Transfer	7 qt
Transfer power takeoff (initial chassis run-in)	½ pt
Front winch:	
Worm housing	1½ pt
End bearing frame	1 pt
Electrical system	24 volts
Number of batteries	2
Type of ground	negative
Voltage	12 ea
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	overhead valves
Number of cylinders	6
Bore (sleeve)	4⅛ in.
Stroke	4⅛ in.
Piston displacement	331 cu in.
Compression ratio	6.73:1
Governed speed, max (no load)	3,600 rpm
Engine speed, max (full load)	3,400 rpm
Idle speed	450 rpm
Brake horsepower (max):	
W/std accessories	127 @ 3,400 rpm
W/o std accessories	147 @ 3,400 rpm
Torque (max):	
W/std accessories	248 lb-ft @ 1,400 rpm
W/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Manufacturer	Spicer Mfg Co
Type	synchromesh
Gear ratios:	
Reverse	7.36:1.00
First	7.55:1.00
Second	4.18:1.00
Third	2.45:1.00
Fourth	1.45:1.00
Fifth	1.00:1.00

CHARACTERISTICS—Continued

Transfer:	
Manufacturer	Wisconsin axle
Type	two-speed, double-sprag
Gear ratio:	
High	1:1
Low	1.98:1
Tires:	
Size	9.00 x 20
Ply	8

Pressure:	*Single*	*Dual*
Highway	70 psi	45 psi
Cross-country	35 psi	45 psi
Mud, snow, sand	15 psi	15 psi

Fuel Octane rating	72 to 80
Axle gear ratio	6.722:1
Axle:	
Weight capacities:	
Empty:	
Front	5,485 lb
Bogie	9,746 lb
Loaded:	
Front	5,855 lb
Bogie	17,726 lb
Approach angle:	
W/front winch	40°
W/o front winch	48°
Departure angle	40°
Turning circle:	
W/front winch	71 ft
W/o front winch	69 ft
Towed load:	
Cross-country	6,000 lb
Highway	10,000 lb

PERFORMANCE

Speed (max):	
Transfer in HIGH range:	
1st gear	8 mph
2d gear	14 mph
3d gear	25 mph
4th gear	42 mph
5th gear	60 mph
Reverse	8 mph
Transfer in LOW range:	
1st gear	4 mph
2d gear	7 mph
3d gear	12 mph
4th gear	21 mph
5th gear	30 mph
Reverse	4 mph
Cruising speed	35-50 mph
Fuel consumption (loaded) 35 to 50 mph	7 to 5 mpg
Cruising range (loaded) 35 to 40 mph	350 mi
Fording depth:	
Unequipped vehicles (top of wave)	30 in.
Equipped and prepared (max)	72 in.
Front winch capacity (max)	10,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

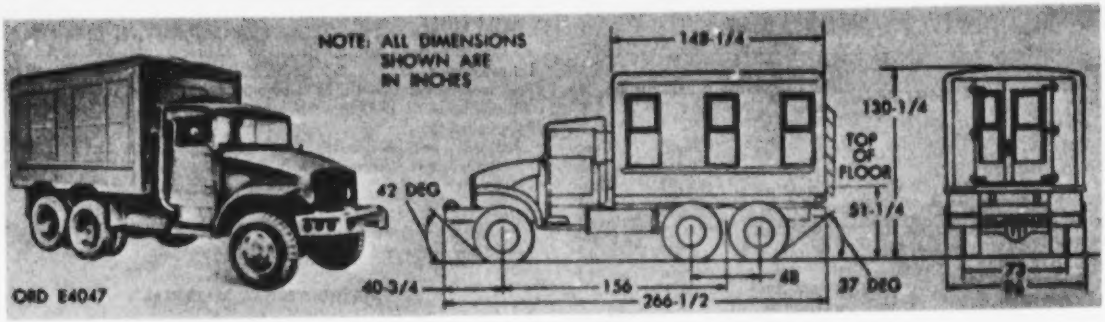
	w/winch	*w/o winch*
Shipped		
Length	277 in.	263 in
Width	99 in.	99 in.
Height	130 in.	130 in.
Volume	2,063 cu ft	1,959 cu ft
Gross weight		
Ship tons	51.58	48.98

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-2320-209-20P, TM 9-1828A, TM 9-8647, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, SNL G-742, LO 9-8022

TRUCK, VAN: SHOP, 2½-TON, 6 X 6, M220, M220C, AND M220D



Major item

Model	*Line item No.*	*Federal stock No.*
M220 w/o winch	4-61834-30	2320-835-8600
M220C	4-61834-35	2320-706-2227 2320-318-9166
M220D w/o winch		2320-705-8942

General

TRUCK, VAN: shop, 2½-ton, 6 x 6, M220, M220C, and M220D provide mobile facilities for maintenance and repair for various services. They are equipped with one driving front axle and two driving rear axles.

Power is supplied by a GMC-type 302, gasoline six-cylinder in line, valve-in-head engine.

A hydromatic transmission, mounted directly to engine, has four automatic forward speeds and one reverse in each of two ranges, high and low.

A single-speed transfer, mounted to rear of transmission, transmits power through propeller shafts to front and rear axles.

A manually operated lever permits transfer to be placed in neutral or driving position.

These vehicles are equipped with hard-top cab and shop van-type body. The body is fully inclosed and equipped with access doors at rear.

All windows at side and front are equipped with exterior sliding blackout panels. Single front and dual rear tires are used. The vehicles are furnished without winch equipment.

Differences among models

Data plate location: The identification plates are located on instrument panel.

Classification:	M220	Standard A (OTCM 36841)
	M220C	Standard B (OTCM 36876)
	M220D	Standard B (OTCM 33876)

CHARACTERISTICS

Crew	2
Weight	
Net	15,085 lb
Payload:	
Off highway	5,000 lb
On highway	7,500 lb
Gross:	
Off highway	20,435 lb
On highway	22,935 lb
Axle gear ratio	6.166:1
Axle load:	
Empty:	
Front	5,305 lb
Bogie	9,780 lb
Loaded:	
Front	5,696 lb
Bogie	14,740 lb
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	
Cross-country	
Sand	
Tread, center-to-center, front	69½ in.
Ground clearance	12 in.
Pintle height, empty	34⅝ in.
Loading height, empty	51¼ in.
Fuel octane rating	80
Capacities:	
Fuel	56 gal
Cooling system	22 qt
Crankcase, refill	8¾ qt
Transmission	15 qt
Transfer:	
Without power takeoff	6½ qt
With power takeoff	7½ qt
Axle:	
Front	15½ pt
Intermediate	13½ pt
Rear	11½ pt
Electrical system:	
Potential	24 volts
No. of batteries (12 volt)	2
Type of ground	negative
Brakes:	
Manufacturer	Bendix
Type	air/hydraulic
Parking brake, type	transfer
Engine:	
Manufacturer	General Motors Corp., Model 302
Type	gasoline, valve-in-head
No. of cylinders (in line)	6
Displacement	301.6 cu in
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower:	
Maximum with standard accessories	130 at 3,400 rpm
Maximum without standard accessories	145 at 3,400 rpm
Torque:	
Maximum with standard accessories	480 lb-ft at 1,200 rpm
Maximum without standard accessories	504 lb-ft at 1,400 rpm
Transmission:	
Type	hydramatic
Forward speeds	8

CHARACTERISTICS—Continued

Engine—Continued	
Transmission—Continued	
Gear ratio:	
High range:	
High	1:1
Low	4.076:1
Low range:	
High	3.82:1
Low	15.57:1
Transfer:	
Speeds	1
Gear ratio	1.16:1

PERFORMANCE

Computed grade ability in lowest gear, loaded	66 percent
Turning radius	34½ ft
Fording depth:	
Without kit	30 in.
With kit	80 in.
Fuel consumption, loaded	5.4 mpg
Cruising range, loaded	300 mi
Allowable speed, governed	55 mph
Maximum tow load allowance:	
Off highway	6,000 lb
On highway	8,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8024.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

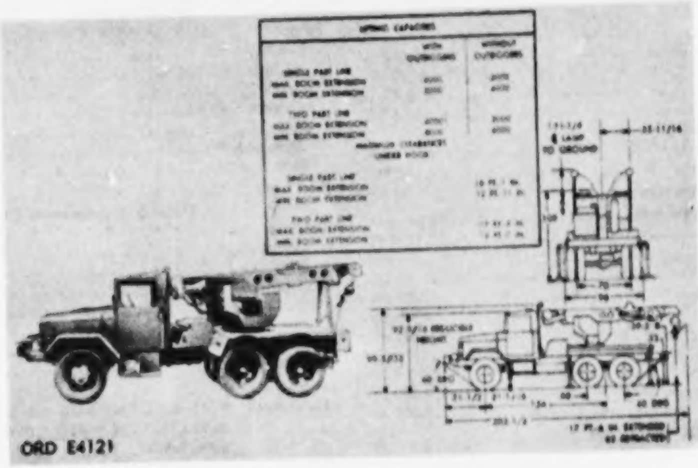
Shipped	
Length	266½ in.
Width	96 in.
Height	130¼ in.
Volume	1,940 cu ft
Area	178 sq ft
Gross weight	
Ship tons	48.50

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8024, TM9-8025-1-2-3, SNL G-749, TM 9-2520-245-35 and 35P, TM 9-2920-210-34, TM 9-8647, TM 9-1825B, TM 9-8627, TM 9-1827A, TM 9-1827C, TM 9-8601, TM 9-1819AC, LO 9-8024.

TRUCK, WRECKER: CRANE, 2½-TON, 6 X 6, M108, W/WINCH, W/E



ORD E4121

Major item

Model	*Line item No.*	*Federal stock No.*
M108	4–61855–10	2320–835–8526

General

TRUCK, WRECKER: crane, 2½-ton, 6 x 6, M108, w/wn, w/e is used to tow, salvage, and recover disabled vehicles and equipment and for numerous repair operations in accordance with the safe load data plate. The wrecker truck M108 has a body platform with a hydraulic crane mounted on chassis M45*. The platform is a steel frame surfaced with welded and bolted safety-tread plate. The crane is positioned in an opening in center of platform and is secured to both platform and chassis frames. Sockets are provided along sides of platform for installation of top bows and tarpaulin with end curtains for camouflage purposes, when necessary. Four outriggers are attached to platform frame, two on each side, to remove load weight from truck springs and wheels during lifting of heavy loads. The truck has engine auxiliary governor to hold engine speed at 1,700 rpm during crane operation. Hydraulic pressure for crane is supplied by hydraulic pump driven from transfer power takeoff.

Differences among models

Data plate location: The identification plates are located on the extreme left portion of cab dash panel.

Classification: M108—Standard A (OTCM 36841)

CHARACTERISTICS

Crew	2
Weight, net	19,785 lb
Axle ratio	6,722:1
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	
Cross-country	
Sand	
Tread, center-to-center, front	67⅝ in.
Ground clearance	12¾
Pintle height	33
Fuel octane rating	72 to 80
Capacities:	
Fuel	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission	4.25 qt
Transfer	7 qt
Axles (each)	7 qt
Winch:	
Oil capacity	1 qt
Load capacity (1st layer)	10,000 lb
Electrical system:	
Potential	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air/hydraulic
Parking brake, type	transfer
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	4-cycle, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4.125 in.
Stroke	4.125 in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,600 rpm
Brake horsepower (max):	
W/std accessories	127 at 3,400 rpm
W/o std accessories	146 at 3,400 rpm
Torque:	
Maximum:	
w/std accessories	248 lb-ft at 1,400 rpm
w/o std accessories	270 lb-ft at 1,400 rpm
Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.98:1

* For characteristics and data, see item on page 21–21.

PERFORMANCE

Computed grade ability in lowest gear, loaded	63 percent
Turning radius	37½ ft
Fording depth:	
Without kit	40 in
With kit	72 in.
Fuel consumption, loaded	7 mpg
Cruising range, loaded	350 mi
Allowable speed, governed	62 mph

EQUIPMENT

Basic Issue Items: See TM 9–8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

M108:

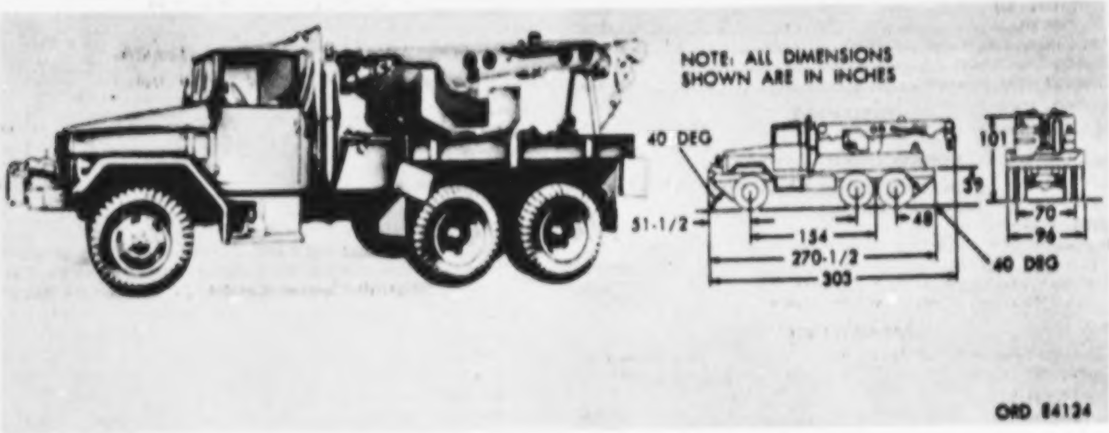
Shipped	
Length	302½ in.
Width	96 in.
Height	99⅝ in.
Volume	1860 cu ft
Area	201.4 sq ft
Ship tons	
Gross weight	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Ship tons	
Gross weight	

References: TM 9–8022, TM 9–8023–1, TM 9–8023–2, SNL G–742, TM 9–2320–209–20P, TM 9–2920–210–34, TM 9–1828A, TM 9–8647, TM 9–8615, TM 9–8623, TM 9–8601, LO 9–8022.

TRUCK, WRECKER: LIGHT, 2½-TON, 6 X 6, M60, W/WINCH, W/E



ORD E4124

Major item

Model	*Line item No.*	*Federal stock No.*
M60		2320-835-8343

General

TRUCK, WRECKER: Light, 2½-ton, 6 x 6, M60, w/wn, w/e is used to tow, salvage, and recover disabled vehicles and equipment and for numerous repair operations in accordance with the safe load data plate. The wrecker truck M60 consists of the chassis truck M45C and a hydraulically-operated crane which is mounted on the rear of the chassis. The crane consists of the crane body, hydraulic pump and relief valve assembly, base plate and pivot post assembly, swing motor, boom, and outriggers.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Crew	2
Weight:	
Net	23,960 lb
Payload:	
Off highway	1,500 lb
On highway	3,500 lb
Gross:	
Off highway	24,460 lb
On highway	25,960 lb
Axle gear ratio	6.722:1
Axle load:	
Empty:	
Front	6,880 lb
Bogie	17,080 lb
Loaded:	
Front	7,246 lb
Bogie	20,564 lb
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	
Cross-country	
Sand	
Tread, center-to center, front	67⅜ in.
Ground clearance	12¾ in.
Pintle height, loaded	34 in.
Fuel octane rating	72 to 80
Capacities:	
Fuel	50 gal
Cooling system	22 qt
Crankcase, refill	9 qt
Transmission (w/power takeoff)	4.25 qt
Transfer	7 qt
Axles (each)	7 qt
Winch:	
Oil capacity	1 qt
Load capacity (1st layer)	10,000 lb
Crane lift capacity (max)	8,000 lb
Electrical system:	
Potential	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Timken-Detroit
Type	air-hydraulic
Parking:	
Type	dual grip drum
At transfer	14 x 3
Engine:	
Manufacturer:	
Reo Motors Inc	Model OA-331
Continental	Model COA-331
Type	4-cycle, valve-in-head
Number of cylinders	(in line) 6
Displacement	331 cu in.
Bore	4⅛ in.
Stroke	4⅛ in.
Compression ratio	6.73:1
Governed speed:	
Full load	3,400 rpm
No load	3,000 rpm
Brake horsepower (max):	
W/std accessories	127 at 3,400 rpm
W/o std accessories	127 at 3,400 rpm
Torque:	
Maximum:	
W/std accessories	248 lb-ft at 1,400 rpm
W/o accessories	270 lb-ft at 1,400 rpm

CHARACTERISTICS—Continued

Transmission:	
Type	synchromesh
Forward speeds	5
Gear ratio:	
High	1:1
Low	7.55:1
Transfer:	
Speeds	2
Gear ratio:	
High	1:1
Low	1.96:1
Crane:	
Swing	360° limited to 270° by stops
Boom:	
Angle (max.)	45°
Extension	8 to 16 ft
Lift:	
Boom fully retracted and outriggers	8,000 lb
Boom fully extended and outriggers	4,000 lb

PERFORMANCE

Computed grade ability in lowest gear	63 percent
Turning radius	37½ ft
Fording depth:	
Without kit	40 in.
With kit	72 in.
Fuel consumption, loaded	6 mpg
Cruising range, loaded	300 mi
Allowable speed, governed at 3,400 rpm	60 mph
Maximum recommended towed load:	
Off highway	6,000 lb
On highway	10,000 lb

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

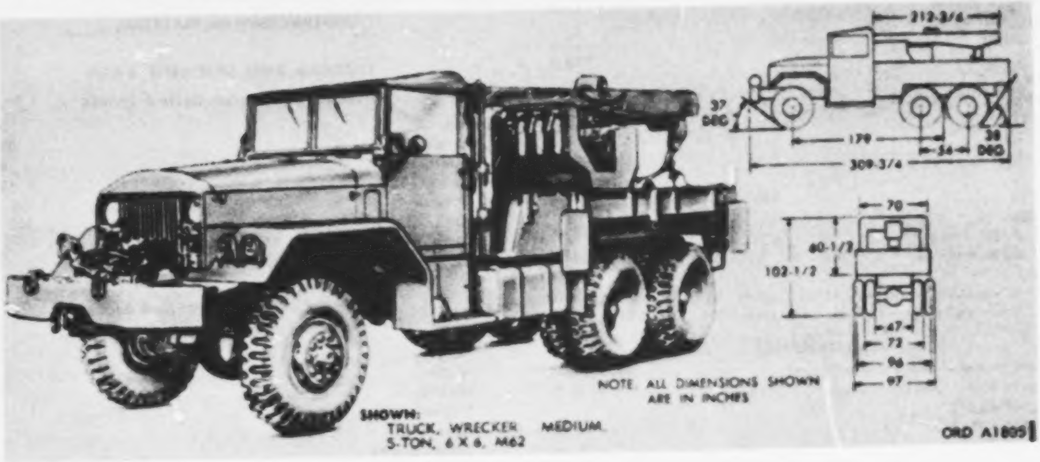
Shipped	
Length	308 in.
Width	96 in.
Height	101 in.
Volume	1,700 cu ft
Area	202 sq ft
Gross weight	
Ship tons	42.50

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-742, TM 9-2320-209-20P, TM 9-8022, TM 9-8023-2, TM 9-8627, TM 9-8647, TM 9-8648, TM 9-8653, TM 9-8655, TM 9-1828A, TM 9-2920-210-34, TM 9-8615, TM 9-8623, TM 9-8601, LO 9-8022.

TRUCK, WRECKER: MEDIUM, 5-TON, 6 X 6, M62 AND M62E1 W/WINCH, W/E



NOTE. ALL DIMENSIONS SHOWN ARE IN INCHES

SHOWN:
TRUCK, WRECKER MEDIUM,
5-TON, 6 X 6, M62

ORD A1805

Major Item

Model	*Line item No.*	*Federal stock No.*
M62	4-61885-20	2320-835-8325
M62E1	4-61885-30	2320-212-9024

General

TRUCK, WRECKER: medium, 5-ton, 6 x 6, M62 or M62E1, w/winch, w/e, is used to tow, salvage, and recover disabled vehicles and equipment and for numerous repair operations in accordance with the safe load data plate. The wrecker truck M62 consists of truck chassis M40C* and the hydraulically-operated crane which is mounted on the rear of the chassis. The hydraulic system is powered by the truck engine.

The lift cylinder assembly used to lower and raise the shipper and boom assembly, is of heavy steel construction.

Differences among models

The M62E1 is the same as the M62 except for the crane which is an improved M1A1 type.

Data plate location

The identification plate is mounted on the instrument panel to the right of the instrument cluster.

Classification: M62—Standard B (OTCM 37676)
M62E1—Standardization pending.

CHARACTERISTICS

Crew	2
Weight:	
Net	33,675 lb
Payload:	
Off highway	7,000 lb
On highway	12,000 lb
Gross:	
Off highway	41,025 lb
On highway	46,025 lb
Live-axle gear ratio	6.443:1
Axle load:	
Empty:	
Front	9,325 lb
Rear (each)	12,175 lb
Off highway:	
Front	5,246 lb
Rear (each)	17,889 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	75 psi
Cross-country	50 psi
Sand	30 psi
Tread, center-to-center, front	78⅝ in.
Ground clearance (under rear bogie torque rod)	10½ in.
Loading height, empty	281½ in.
Pintle height, loaded	28⅝ in.
Fuel octane rating	80
Capacities:	
Fuel	78 gal
Cooling system	44 qt
Crankcase, refill	18 qt
Transmission (with power takeoff)	11 qt
Transfer	5.2 qt
Axles:	
Front	12 qt
Rear (each)	12 qt
Winch:	
Oil capacity:	
Front	1.3 qt
Rear	3 qt
Load capacity:	
Front	20,000 lb
Rear	40,000 lb
Crane winch gearcase	8 qt
Pivot gearcase	15 lb
Crane lift capacity (max)	20,000 lb
Electrical system:	
Potential	24 volts
Number of batteries	2 (12 volt)
Type of ground	negative
Brakes:	
Manufacturer	Timken
Type	hydraulic, air-actuated
Parking brake, type	dual grip
Engine:	
Manufacturer, Continental	Model R-6602
Type	4-cycle, valve-in-head
Number of cylinders	(in line) 6
Displacement	602 cu in.
Bore	4⅞ in.
Stroke	5⅜ in.
Compression ratio	6.4
Governed speed:	
Full load	2,800 rpm
No load	2,950 rpm
Brake horsepower (max w/std accessories)	196 at 2,800 rpm
Torque (max)	480 lb-ft at 1,200 rpm

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* For characteristics and data, see item on page 21-33.

CHARACTERISTICS—Continued

Transmission:	
Type	synchromesh
Forward speeds	
Gear ratio:	
High	1.00:1
Fourth	1.43:1
Low	7.31:1
Transfer:	
Speeds	2
Gear ratio:	
High, front	1.066
Low, front	2.168
High, rear	1.000
Low, rear	2.034

PERFORMANCE

Computed grade ability in lowest gear (with towed load, off highway)	36.28 percent
Turning radius	41.583 ft
Fording depth, maximum w/fording equipment	78 in.
Fuel consumption, loaded (at 30 mph, off highway)	2.74 mpg
Cruising range, loaded	214 mi
Allowable speed, governed	52.6 mph
Maximum recommended towed load, gross:	
Off highway	30,000 lb
On highway	50,000 lb

EQUIPMENT

Basic Issue Items: See TM 9-8028.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

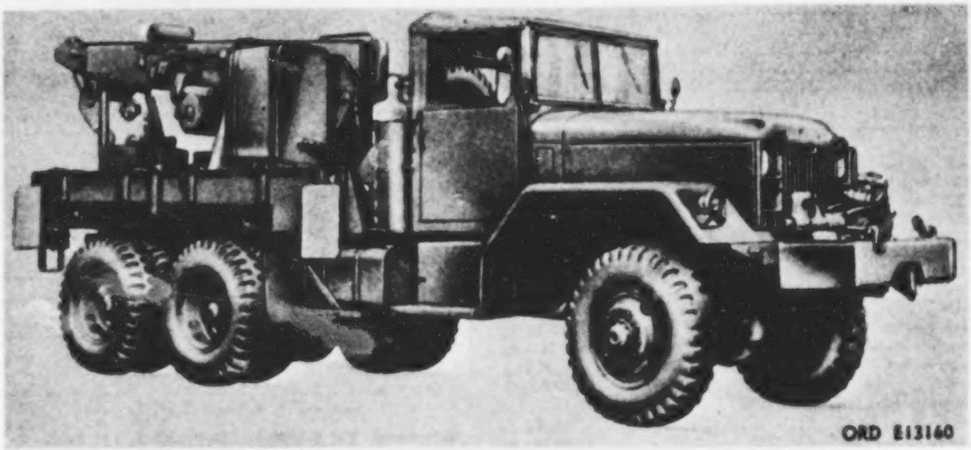
Shipped	
Length	309⅝ in.
Width	97 in.
Height	102⅜ in.
Volume	1,780 cu ft
Area	208 sq ft
Gross weight	34,760 lb
Ship tons	44.50

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8029-1, TM 9-8029-2, TM 9-8029-3, SNL G-744, TM 9-1827A, TM 9-1827B, TM 9-1827A, TM 9-1827C, TM 9-8615, TM 9-2920-210-34, TM 9-1828A, TM 9-1825B, TM 9-8627, TM 9-8647.

TRUCK, WRECKER: MEDIUM, 5-TON, 6 X 6, M543, W/FRONT WINCH



ORD E13160

Major item

Model	*Line item No.*	*Federal stock No.*
M543	4-61885-35	2320-445-0866

General

TRUCK, WRECKER: Medium, 5-ton, 6 x 6, M543, w/front winch, is used to tow, salvage, and recover disabled medium vehicles and equipment. It consists of the wrecker crane which is mounted on a truck chassis M40C*.

Differences among models

Data plate location: An identification plate is mounted on the instrument panel to the right of the instrument cluster.

Classification: Standard A (OTCM 37676)

CHARACTERISTICS

Wrecker crane:

Manufacturer	Gar Wood
Type	hydraulic
Capacity rating	10,000 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Area
  Gross weight
  Ship tons

Outside Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Area
  Gross weight
  Ship tons

References: TB 9-2500-203-35/1, TM 9-8029-3, TM 9-8028, w/changes; TM 9-2920-210-34, TM 9-2320-211-20P, TM 9-1837A, TM 9-1837B, TM 9-1827A and C, TM 9-8615, TM 9-1828A, TM 9-1825B, TM 9-8627, TM 9-8647, SNL G-744, LO 9-8028.

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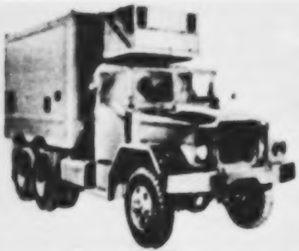
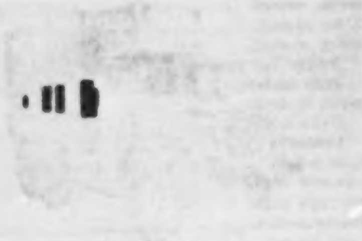
* For characteristics and data, see item on page 21-17.

TRUCK, VAN: SHOP, 2½-TON, 6 X 6, M512, M512C, M512D, M512F, AND M512G

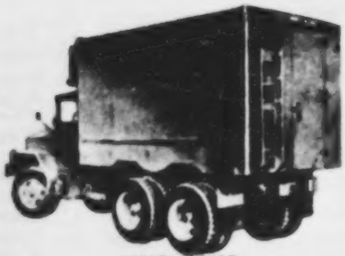


M512

M512C



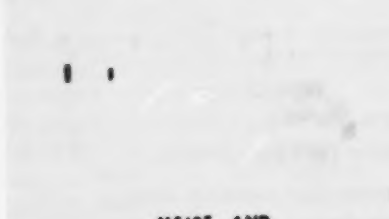
M512D



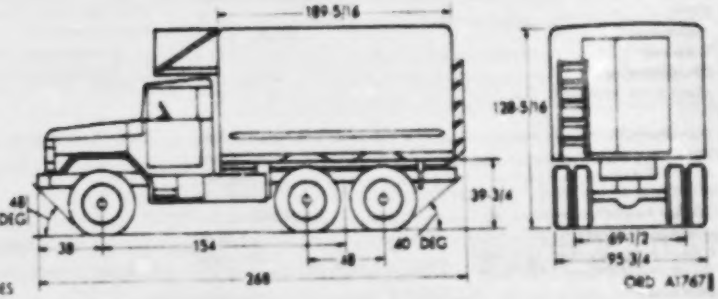
M512, M512F, AND M512G

M512C

M512D



M512F AND M512G



NOTE ALL DIMENSIONS SHOWN ARE IN INCHES

ORD A17671

Major item

Model	*Line item No.*	*Federal stock No.*
M512		2320-446-7541
M512C		2320-446-7542
M512D		2320-446-7543
M512F		2320-446-7544
M512G		2320-446-7545

General

TRUCK, VAN: shop, 2½-ton, 6 x 6, M512, M512C, M512D, M512F, and M512G, is a van-type field maintenance truck, so designed as to transport electronic and/or other equipment for use in the ground vehicle support of the LACROSSE MISSILE SYSTEM.

Current models of the shop van bodies are mounted upon the 2½-ton, 6 x 6, M45 truck chassis. Bodies are wired for three electrical circuits, 115-volt ac, 208-volt ac, and 24-volt dc.

Differences among models

Power connector inlet box, van body location: M512, on right side panel toward the front, M512C, on front panel at lower right corner, M512D, on right side panel toward rear, M512F and M512G, on right side panel nearer the front than on M512.

Transformer-rectifier air inlet, van body location: M512, on right side panel toward front, M512C, on front panel at lower left.

Hydraulic test stand air inlet, van body location: M512D only, two inlets side by side on right side panel toward front.

Hydraulic test stand exhaust, van body location: M512D only, one exhaust located on front panel at lower right.

Antenna receptacle, van body location: M512C only, on left side panel, above the transformer-rectifier air inlet.

The M512 has an additional 115-volt ceiling light over the regular three.

The M512C only, has a cable access door located on the van body right side panel, below rub rail, toward the front.

Data plate location

An identification plate is located on instrument panel to right of instrument cluster.

Classification: Standard B (OTCM 37828).

CHARACTERISTICS

Crew	2
Length, overall	268 in.
Width, overall	95⅝ in.
Height, overall:	
Empty (as supplied for travel)	$128\frac{9}{16}$ in.
Fully loaded	$127\frac{9}{16}$ in.
Height, loading:	
Unloaded	49⅝ in.
Loaded	48⅝ in.
Pintle height	34 in.
Approach angle	48 deg
Departure angle	40 deg
Turning radius	36 ft
Towed load:	
Cross-country	6,000 lb
Highway	8,000 lb
Heater system power supply:	
Input	115 volts, ac, 60 cycle
Output	24 volt dc
Heater system fuel pump:	
Input	24 volt dc
Air conditioner:	
Air output (maximum)	1300 cfm
Temperature (maximum)	125° F.
Temperature (minimum)	60° F.
Power	3-phase, 115 volts ac, 60-cycle
Space heater:	
Power	single phase, 155-volt ac, 60 cycle
Output	60,000 BTU/hr.
Wheel base	154 in.
Tires:	
Size	9x20 dual in rear
Ply	8

Pressures:	Single	Dual
Highway	70	45
Cross-country	35	45
Mud, snow and sand	15	15

Engine:	
Manufacturer	Reo
Type	6 cylinder, overhead valve
Bore (sleeve)	4⅛ in.
Stroke	4⅛ in.
Piston displacement	331 cu in.
Compression ratio	6.73:1
Governed speed, max (no load)	3,600 rpm
Engine speed, max (full load)	3,400 rpm
Idle speed	450 rpm
Brake horsepower (max):	
W/std accessories	127 @ 3,400 rpm
W/o std accessories	147 @ 3,400 rpm
Torque (max):	
W/std accessories	248 lb-ft @ 1,400 rpm
W/o std accessories	270 lb-ft @ 1,400 rpm
Transmission:	
Manufacturer	Spicer Mfg Co.
Type	synchromesh
Gear ratios:	
Reverse	7.36:1.00
First	7.65:1.00
Second	4.18:1.00
Third	2.45:1.00
Fourth	1.45:1.00
Fifth	1.00:1.00
Transfer:	
Manufacturer	Wisconsin axle
Type	two-speed, double-sprag
Gear ratio:	
High	1:1
Low	1.96:1
Fuel octane rating	80
Axle gear ratio	6.72:1
Axle:	
Weight capacities:	
Empty:	
Front	
Bogie	
Loaded:	
Front	6,105 lb
Bogie	9,725 lb

PERFORMANCE

Speed (max):	
Transfer in HIGH range:	
1st gear	8 mph
2d gear	14 mph
3d gear	25 mph
4th gear	42 mph
5th gear	60 mph
Reverse	8 mph
Transfer in LOW range:	
1st gear	4 mph
2d gear	7 mph
3d gear	12 mph
4th gear	21 mph
5th gear	30 mph
Reverse	4 mph
Cruising speed	35-50 mph
Fuel consumption (loaded) 35-40 mph	7-5 mpg
Cruising range (loaded) 35-40 mph	300 mi
Fording depth:	
Unequipped vehicles (top of wave)	30 in.
Equipped and prepared (max)	

EQUIPMENT

Basic Issue Items: See TM 9-8022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 truck uncrated	
Length	268 in.
Width	96 in.
Height	128⅝ in.
Volume	1,822 cu ft
Area	181.2 sq ft
Gross weight	15,860 lb
Ship tons	46

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8022, TM 9-2300-223-20P, SNL G-742 (M45 Truck Chassis), TM 9-2320-209-20P, TM 9-2320-209-35P.

SECTION 22

TRAILERS

(CLASS 2330)

(Includes semitrailer chassis, trailer chassis, trailer dollies, semitrailers, and trailers)

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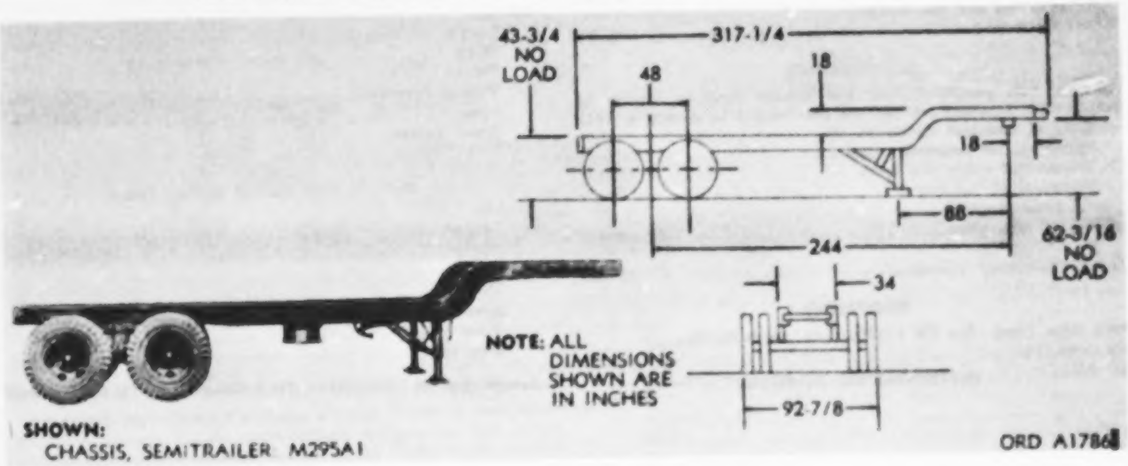
CHASSIS, SEMITRAILER: 6-TON, 4-WHEEL, M295 AND M295A1



SHOWN:
CHASSIS, SEMITRAILER M295A1

Major item

Model	*Line item No.*	*Federal stock No.*
M295A1		2330-649-8124
M295		2330-542-4353

General

CHASSIS, SEMITRAILER: 6-TON, 4-WHEEL M295 and M295A1, is a 4-wheel vehicle designed to be towed by the TRUCK, TRACTOR: 2½-ton, 6x6, M221* or M275*. The main purpose of the semitrailer chassis is to receive the body of a van semitrailer, and provide a mobile shop for the Army and for use as a field spare parts carrier.

The semitrailer chassis has a standard Ordnance kingpin for use with Ordnance fifth wheel and pintle for towing purposes. The chassis has been designed for fording hard bottom water crossings deep enough to submerge the running gear of the semitrailer chassis.

The frame is the main supporting member for mounting the assemblies which comprise the chassis. The chassis has a single point, two spring, tandem axle suspension which utilizes parallelogram type linkage. When properly connected, the service brake pedal on the towing vehicle operates the brakes on both tower and trailer. The wheels are the offset disk-type rim with split-type retaining side ring. Lights on the semitrailer chassis are controlled by the light switch on the instrument board of the towing vehicle. A retracting crank type adjustable landing gear is used to support the chassis when not coupled to a towing vehicle. A spare wheel and tire carrier is mounted on the left side of the frame, midway between the tandem suspension and the landing gear.

Differences among models

M295 chassis is a component of the Engineer's Electrical Repair Shop, Semitrailer Mounted, Set No. 4.

M295A1 is a component of Semitrailer, Van, Shop, Folding Side, 6-ton, 4-wheel, M447 and of Semitrailer, Van: expansible, 6-ton, 4-wheel, M313.

Data plate location

Two plates are located on the right-hand side of the frame at the midpoint of the side rail.

Classification: M295—STANDARD B (OTCM 37347)
M295A1—STANDARD A (OTCM 37347)

CHARACTERISTICS

Weight	*Highway*	*Cross-country*
Net	5,700 lb.	5,700 lb.
Payload	15,000 lb.	12,000 lb.
Gross	20,700 lb.	17,700 lb.

Towing facilities	Kingpin
Kingpin:	
Height empty	56 in.
To centerline of axle	244 in.
To centerline of landing gear	88 in.
Minimum ground clearance	11 in.
Departure angle	65°
Fording depth	44 in.
Overall length	317¼ in.
Overall width	92⅞ in.
Kingpin to front	18 in.
Kingpin to center of axle bogie	244 in.
Tandem axle spacing	48 in.
Overall height:	
Loaded	58$^{15}/_{16}$ in.
Empty	62$^{3}/_{16}$ in.
Tread:	
Center-to-center between duals	72 in.
Axle:	
Type	tubular Ordnance std. 10,000 lb.
Diameter	4½ in.
Parking brake	Chock blocks
Service brakes:	
Actuation	air-over-hydraulic
Make	Wagner Electric Corp.
Size:	
Diameter	15 in.
Width	3$^{11}/_{32}$ in.
Operating air pressure	100 psi
Landing gear:	
Type	Collapsible and adjustable
Make	Austin
Clearance above ground with gear retracted	20½ in.
Drop below ground line with rear extended	4½ in.
Lights:	
Voltage	24v
Tires:	
Size	9.00 x 20
Ply	8
Type	Military pneumatic
Tire inflation:	
Highway	40 psi
Cross-country	48 psi
Sand	32 psi

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*For characteristics and data, see item in section 21.

Maximum towing speed:	
Cross-country	20 mph
Highway	45 mph
Spare wheel and tire carrier:	
Clearance between mounted wheel and ground	15½ in.

PERFORMANCE

Chassis with applicable body and payload shall be capable of operating for extended periods, without damage to chassis or body resulting, at sustained speeds up to:

Highways and improved roads	45 mph
Unimproved roads and trails	20 mph
Belgian block test course	10 mph
Slope operation:	
Side slope	20 percent
Fordability:	
Completely submerged	15 min

EQUIPMENT

Basic Issue Items: See TM 9-2330-238-14, appendix III.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

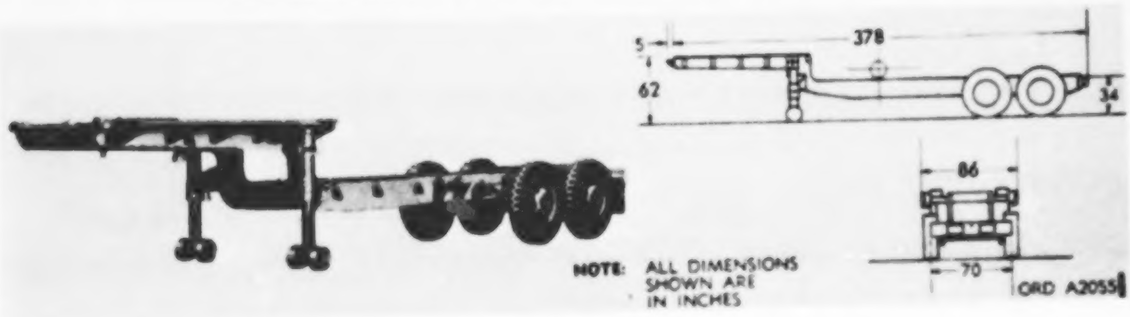
Shipped	
Length	
Width	
Height	
Volume (uncrated)	1060.4 cu. ft.
Area	204.6 sq. ft.
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-238-14, TM 9-2330-238-24P, TM 9-2300-223-20P.

CHASSIS, SEMITRAILER: 6-TON, 4-WHEEL, XM539



Model	Line item No.	Federal stock No.
XM539		2330-712-8542

General

CHASSIS, SEMITRAILER: 6-ton, 2-wheel, XM539 is used as the semitrailer chassis for the organizational maintenance test station and the field maintenance test station of the SERGEANT artillery guided missile system.

The chassis with serial numbers 6001, 6002, 6004, and 6007 are equipped with trailing arm suspension units. All other chassis bearing serial numbers in the 6000 series are equipped with torsion bar suspension units.

The chassis equipped with torsion bar suspension units is also a component of SEMITRAILER, LOW BED: 6-ton, 4-wheel, XM527.*

Differences among models

Data plate location

The identification plate is located on the front right side of the gooseneck structure of the chassis.

Classification:

CHARACTERISTICS

Weight:	
Net:	
Trailing arm suspension chassis	4,800 lb
Torsion bar suspension chassis	4,950 lb
Payload	15,200 lb
Gross:	
Trailing arm suspension chassis	20,000 lb
Torsion bar suspension chassis	20,150 lb
Empty:	
Fifth wheel	
Rear wheels	
Loaded:	
Fifth wheel	
Rear wheels	
Length, overall	383 in.
Kingpin to front	378 in.
Kingpin to center of axle	
Width, overall	86 in.
Height, overall	62 in.
Loading height, empty	34 in.
Fifth wheel height	51 in.
Ground clearance	20 in.
Angle of departure:	
Trailing arm suspension chassis	34 deg
Torsion bar suspension chassis	33 deg
Tread, center to center	70 in.
Electrical system	24 volt
Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking, type	mechanical
Tires:	
Number	4
Size	11.00 x 20
Ply	12
Pressure:	
Highway	75 psi
Cross-country	35 psi
Sand	15 psi

PERFORMANCE

Maximum towed speed:	
Cross-country	20 mph
Highway	55 mph

PRIME MOVER

EQUIPMENT

Basic Issue Items: See TM 9-2330-300-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis.	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 chassis.	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-300-14, TM 9-2330-300-24P, TM 9-2300-223-20P.

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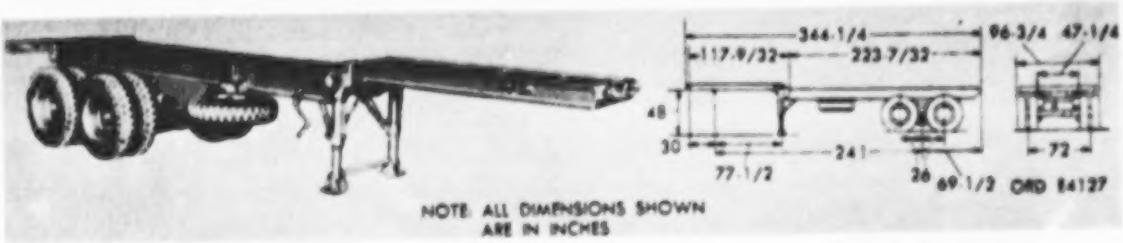
* For characteristics and data, see item on page 22-24.

CHASSIS, SEMITRAILER: 12-TON, 4-WHEEL, M126, M126A1, AND M126A1C



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Model	*Line item No.*	*Federal stock No.*
M126		2330-200-1784
M126A1		2330-141-8233
M126A1C		2330-752-9749

General

CHASSIS, SEMITRAILER: 12-TON, 4 WHEEL, M126, M126A1 and M126A1C, is designed to be towed by the TRUCK, TRACTOR: 5-ton 6 x 6, M52* or similar vehicle equipped with fifth wheel, air supply, and a 24-volt electrical system. The M126, M126A1, and M126A1C are the chassis models used for SEMITRAILER, STAKE: 12-ton, 4-wheel, M127, M128, and M129 and the various modified models.

The semitrailer chassis consists of a frame assembly, tandem suspension assembly, four dual wheels, landing gear assembly, electrical system, and a spare wheel and tire carrier. The chassis has a standard Ordnance kingpin for use with Ordnance fifth wheel for towing purposes. The chassis has been designed for fording hard bottom water crossings deep enough to submerge the running gear of the semitrailer chassis.

The frame is the main supporting member for mounting the assemblies which comprise the semitrailer chassis. The frame is a welded unit consisting of two siderails, crossmembers, and a plate and channels to support the kingpin. Mounting holes are provided to attach the taillights, spare wheel and tire carrier, landing gear, light wiring, braking system components, and rear bumper pads.

Differences among models

The semitrailer chassis M126 is equipped with an airbrake system.

The semitrailer chassis M126A1 and M126A1C is equipped with an air-over-hydraulic brake system.

Chassis M126 is equipped with four S-cam, 2-shoe, double anchor, expanding type wheel brake assemblies, while chassis M126A1 is equipped with four hydraulically operated, self-centering, "FR2S-" type wheel brake assemblies.

Data plate location: The data plate is located on the right side of the front end of the chassis frame beam over the fifth wheel upper plate.

Classification: M126—Standard B (OTCM 36876)
M126A1—Standard A (OTCM 36876)

CHARACTERISTICS

Weight:	
Net:	
M126	8,470 lb
M126A1	9,300 lb
M126A1C	
Gross including body and payload (M127 body):	
Off highway	37,500 lb
On highway	49,500 lb
Weight distribution:	
Kingpin	1,440 lb
Axle	6,940 lb
Landing gear	2,750 lb
Tires:	
Number	8
Size	11.0 x 20
Type	NDCC military
No. of plies	12
Tire inflation:	
Highway	60 psi
Cross-country driving	60 psi
Sand driving	15 psi
Angle of departure (loaded)	50°
Vehicle dimensions:	
Ground clearance	17 in.
Height of kingpin (landing gear fully extended)	48 in
Electrical system	24 v
Brakes:	
Drum size	16½ dia x 5½ w
Type	2-shoe-cam-action
Wheels:	
Type	dual, military disk
Rim size	20 x 7.5
No. of studs	10
Dia of stud circle	11¼ in.
Landing gear:	
Type	vertical, two legs, with feet
Manufacturer	Fruehauf Trailer Co
Length, to top of floor:	
When retracted	3 ft. 9 in.
Extended	5 ft
Operation	handcrank, two speed
Width, at feet (overall)	4 ft. 2⅝ in
Frame (main frame and body frame combined):	
Type	welded pressed and structural steel
Length	28 ft. 8¼ in.
Width	8 ft
Main beams (depth)	12 in.
Side rails, body frame (depth)	6⅝ in.

PERFORMANCE

Maximum towing speed:	
Off highway	30 mph
On highway	55 mph
Fording depth	55 in.

EQUIPMENT

Basic Issue Items: See TM 9-2330-207-14.

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA

Within Continental United States

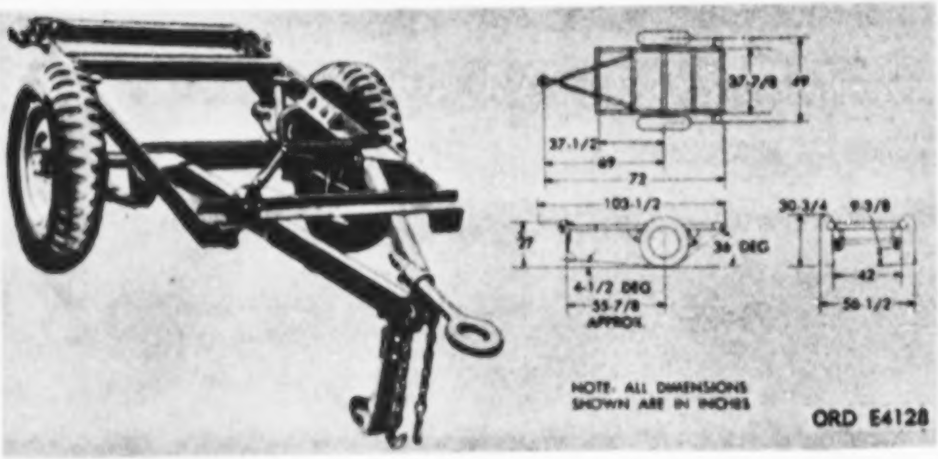
	M190	*M190A1*	*M190A1C*
Shipped			
Length			
Width			
Height			
Volume		1,030 cu ft	
Area		229 sq ft	
Gross weight		8,380 lb	
Ship tons			

Outside Continental United States

	M190	*M190A1*	*M190A1C*
Shipped			
Length			
Width			
Height			
Volume			
Area			
Gross weight			
Ship tons			

References: TM 9-2330-207-14, TM 9-2330-207-24P

CHASSIS, TRAILER: ¼-TON, 2-WHEEL, M115



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Major item

Model	***Line item No.***	***Federal stock No.***
M115		2330-835-8590

General

CHASSIS, TRAILER: ¼-ton, 2-wheel, M115, is designed to support a general purpose cargo carrier M100 capable of carrying a load of 500 pounds. The prime mover is a TRUCK, UTILITY: ¼-ton, M38* series.

The chassis is composed of the springs and shock absorbers, axle, wheels and tires, parking brake electrical system, drawbar, and support leg.

The frame is suspended on two semielliptical leaf-type springs with double wrapped eyes. The shock absorbers are direct-acting, two-way control units, mounted on rubber bushings. The axle is of a one-piece tubular design, fastened to the springs by means of U-shaped clips and the spring clip plates. The wheels are of the two-piece riveted steel construction and are fastened to the wheel hub by five wheel bolts and nuts. The brake system is a hand-operated internal expanding, double anchor, two-shoe type parking brake with cable control. The trailer electrical system consists of two taillights and their wiring harness. The A-frame drawbar is bolted to the trailer frame. The lunette eye is spring mounted in the front support bracket. The support leg is mounted on the bracket so that it can be swivelled into position up in the A-frame when the trailer is in operation or straight down when the trailer is parked.

Differences among models

Data plate location

Classification: Standard B (OTCM 37760)

CHARACTERISTICS

Prime mover	truck, utility, ¼-ton, 4 x 4, M38 series*
Curb weight	380 lb
Gross weight including body and payload:	
Cross-country	1,065 lb
Highway	1,315 lb
Lunette data:	
Height empty	27 in.
To centerline of axle	69 in.
To centerline of landing gear	13⅛ in.

Axle:	
Manufacturer	Liggett Spring and Axle Co.
Ordnance part No.	7328288
Type	tubular
Road clearance	13.5 in.
Wheel bearings	tapered roller
Parking brake: internal expanding	
Drum size	9 in. dia x 2 in. wide
Actuation	manual
Mounting	axle
Effective slope	30 percent
Springs:	
Length-centerline of eyes	36¼ in.
Width	1¾ in.
No. of leaves	10
Pivot bolt	front
Shackle U-bolt	rear
Shock absorbers:	
Type	single-acting
Length (compressed)	10.37 in.
Length (extended)	16.43 in.
Adjustable	no
Refillable	no
Taillights:	
Voltage	24-28 volt
Lamp sizes	32 candlepower and 3 candlepower
Wheels:	
Type	automotive, riveted construction
Rim size	16 x 4.50
No. of bolts	5

PERFORMANCE

Departure angle	36°
Minimum ground clearance	9⅛ in.
Fording depth	submersible
Maximum towing speed:	
Cross-country	18 mph
Highway	50 mph

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-747.

INSTRUCTIONAL MATERIAL

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* For characteristics and data see item in section 21.

STORAGE AND SHIPMENT DATA

Within Continental United States

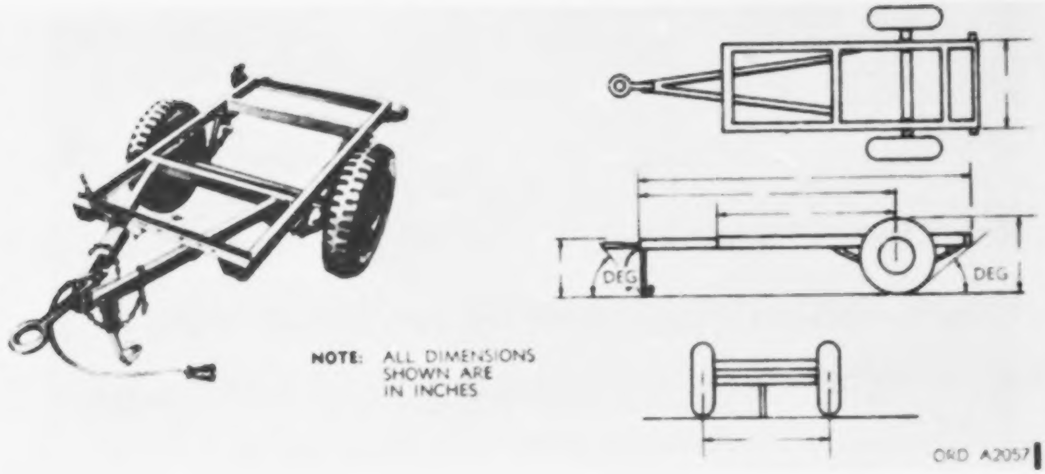
Shipped	
Length	
Width	
Height	
Volume	115 cu ft
Area	
Gross weight	380 lb
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-747 and TM 9-871A (includes chassis M115 components).

CHASSIS, TRAILER: ¼-TON, 2-WHEEL, M569 (XM569)



ORD A2057

Model	*Line item No.*	*Federal stock No.*
M569		2330-884-4817

General

CHASSIS, TRAILER: ¼-ton, 4-wheel, M569 (XM569) is the basic chassis for TRAILER, CARGO: ¼-ton, 2-wheel, M416[°]. The chassis consists of a frame secured to a one piece axle by semi-elliptical springs. A drawbar is attached to the front of the chassis. The towing end of the drawbar assembly is equipped with a lunette which receives the pintle hook of the towing vehicle. A retractable riveted front support leg attached to the drawbar bracket can be swung down to support the front of the trailer when it is uncoupled from the towing vehicle.

Differences among models

Data plate location

Classification: Standard A (OTCM 37760).

CHARACTERISTICS

Weight	
Length	
Width	
Height	
Ground clearance	
Angle of approach	
Angle of departure	
Lunette height (empty)	2 position, 23 in. and 26 in.
Electrical system	24 volt
Axle:	
Type	tubuler
Length	58¾ in.
Diameter	$2\frac{9}{32}$ in.
Spindle	$1\frac{23}{32}$ in.
Springs:	
Type	semielliptical
Length (center line of eyes—flat)	36⅛ in.
Width	1¾ in.
Number of leaves	10
Wheels:	
Manufacturer	
Rim size	16 dia x 4.50
Number of studs	5
Tires:	
Size	7.00 x 16
Ply	6
Number	2
Pressure:	
Highway	25 lb
Cross-country	22 lb
Sand	18 lb
Tread, center to center	52¾ in.
Handbrake:	
Actuation	mechanical
Hand lever assembly:	
Location	front cross member
Number	1

PERFORMANCE

Maximum towed speed:	
Cross-country	
Highway	
Fording depth	

EQUIPMENT

Basic Issue Items: See TM 9-2330-251-14P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

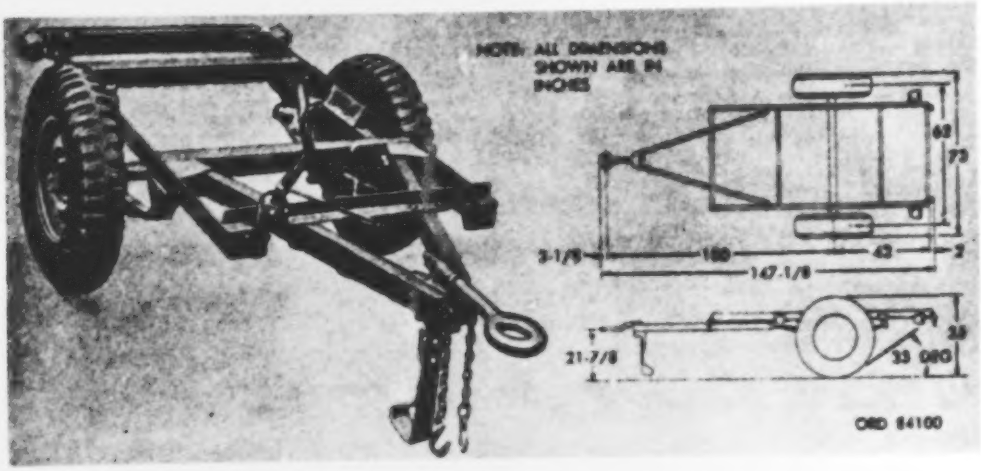
Shipped 1 chassis.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Reference: TM 9-2330-251-14P.

[°] For characteristics and data, see item on page 22-91.

CHASSIS, TRAILER: ¾-TON, 2-WHEEL, M116



Major item

Model	*Line item No.*	*Federal stock No.*
M116		2330-542-5987

General

CHASSIS, TRAILER: ¾-ton, 2-wheel, M116, consists essentially of a heavy-duty frame secured to a one-piece axle by semielliptical springs. The center of each spring is bolted to the axle. The ends of the first spring leaves are bolted to the spring front and rear hangers on the chassis. Two rubber tired wheels are mounted on the axle. This chassis is used for mounting cargo body to make TRAILER, CARGO: ¾-ton, M101.*

A drawbar assembly is attached to the front of the chassis. The towing end of the drawbar assembly is equipped with a lunette which receives the pintle hook of the towing vehicle. A retractable riveted front support leg attached to the drawbar bracket can be swung down to support the front of the trailer when it is uncoupled from the towing vehicle. A spring loaded plunger locks the support leg in the raised or lowered position. Two handbrake levers at the front of the chassis are connected by a suitable linkage to a separate parking brake for each wheel.

Three taillights are mounted at the rear of the chassis. These lights are connected to the towing vehicle by an intervehicular cable and are operated from the towing vehicle.

Differences among models

Data plate location

Identification plates are furnished with each vehicle and riveted to the front panel of the trailer body which is assembled to the chassis. This assembled unit is ¾-ton, 2 wheel, cargo trailer, M101.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Prime mover	TRUCK, CARGO: ¾-ton, 4 x 4, M37 series**
Curbweight	875 lb
Manufacturer	Gar-Wood Indust
Weights:	
Chassis	1,340 lb
Payload, highway use	2,250 lb
Payload, cross-country use	1,500 lb
Ground clearance	14 in.
Axle:	
Model	7339451
Type	one-piece tubular steel
Springs:	
Manufacturer	Stanley Spring Works
Model	7339463
Type	semielliptical
Size	2 in. x 46 in.
No. of leaves	7
Rate of deflection	295-339 lb per in.
Shock absorbers:	
Manufacturer	Monroe Auto Equip Co.
Model	18,680
Type	hydraulic, double-acting
Wheels:	
Tread	62 in.
Manufacturer	Budd Co.
Rim size	16 x 6.50 in.
No. of stud holes	5
Tires:	
Type	military, 8 ply, nondirectional tread
Size	9 x 16
Tire pressure (max)	40 lb, highway
Hand brakes:	
Actuation	mechanical
Hand lever assemblies:	
Location	front of frame, each side
Number	2
Drum size	14 dia x 2 wide
Effective slope	30 percent
Electrical system:	
Voltage	24 volt
Lunette:	
Height to ground, loaded	21⅞ in.
To centerline of axle	100 in.
To centerline of landing gear	14¼ in.
Frame:	
Manufacturer	Gar-Wood Indust
Type	welded construction

PERFORMANCE

Departure angle	33°
Fording depth	28 in.
Maximum towing speed:	
Cross-country	30 mph
Highway	55 mph

---

* For characteristics and data, see items on page 22-58.

** For characteristics and data, see item in section 21.

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-748.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

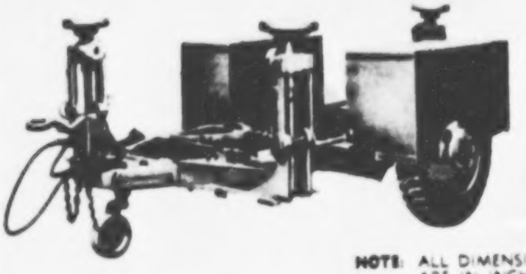
Shipped
  Length……………………………………………
  Width……………………………………………
  Height……………………………………………
  Volume……………………………………………
  Area……………………………………………
  Gross weight……………………………………………
  Ship tons……………………………………………

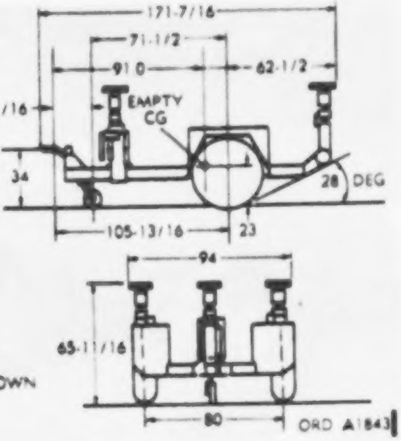
Outside Continental United States

Shipped
  Length……………………………………………
  Width……………………………………………
  Height……………………………………………
  Volume……………………………………………
  Area……………………………………………
  Gross weight……………………………………………
  Ship tons……………………………………………

References: TM 9-2330-256-14, TM 9-874A

CHASSIS, TRAILER: 1-TON, 2-WHEEL, M514 (XM389E1)





NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Model	*Line item No.*	*Federal stock No.*
M514	-------------------------------	2330-542-5758

General

CHASSIS, TRAILER: 1-ton, 2-wheel, M514 (XM389E1), consists essentially of a heavy-duty frame supported by an independent trailing arm suspension, and a retractable swivel caster at the front. The frame is rectangular shape, with an "A" shaped extension at the front for mounting the caster and lunette, and has welded, watertight, box type members. The chassis is equipped with three leveling jacks, two in the front and one at the rear.

Differences among models

Data plate location

The identification plate is attached to the front of the chassis channel crossmember.

Classification: Limited production (OTCM 37340).

CHARACTERISTICS

Weight:	
Net	2280 lb
Payload	2460 lb
Gross	4740 lb
Empty:	
Lunette eye	800
Wheels	1880
Load landing leg	
Lunette eye	478
Wheels	4162
Landing leg	
Length	171 7/16 in.
Width	94 in.
Height (to top of leveling jacks)	65 11/16 in.
Height (loaded, top of frame to ground)	22 in.
Ground clearance	14 in.
Angle of approach	13 deg
Angle of departure	28 deg
Lunette height (empty)	4 way adjustable, 22, 26, 30, and 34 in.
Electrical system	24 volts
Tires:	
Size	9.00 x 20
Ply	8
Number	2
Pressure:	
Highway	45 psi
Cross country	
Sand	
Tread, center to center	80 in.
Wheels:	
Manufacturer	Budd Co.
Rim size	20 x 7.875
Number of stud holes	6
Brakes (service):	
Actuation	air-over-hydraulic
Drum size	15¼ dia x 2
Type of brake mechanism	two-shoe, single
Handbrakes:	
Actuation	mechanical
Hand lever assemblies:	
Location	under frame, each side
Number	2

PERFORMANCE

Maximum towed speed:	
Cross-country	25 mph
Highway	50 mph
Fording depth	entire

EQUIPMENT

Basic Issue Items: See TM 9-2330-236-15.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

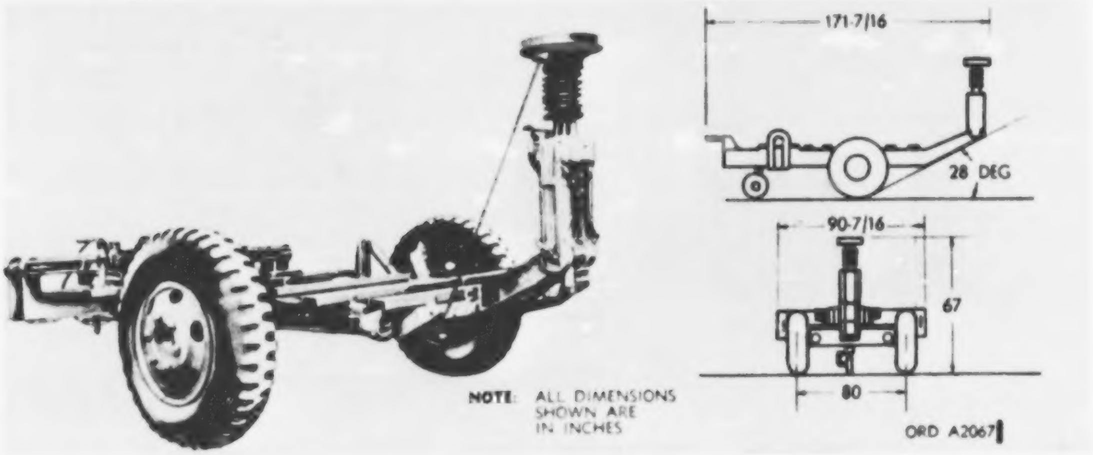
Shipped	
Length	
Width	
Height	
Volume	626 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	626 cu ft
Area	
Gross weight	
Ship tons	

References: LO 9-2330-236-10, TM 9-2330-236-15, TM 9-2330-236-25P, TM 9-2300-228-20P.

CHASSIS, TRAILER: 1-TON, 2-WHEEL, XM545



ORD A2067

Model	*Line item No.*	*Federal stock No.*
XM545		2330–783–7574

General

CHASSIS, TRAILER: 1-ton, 2 wheel, XM545, consists essentially of a heavy duty frame supported by an independent trailing arm suspension, and a retractable swivel caster at the front. The frame is rectangular shape, with an "A" shaped extension at the front for monitoring the caster and lunette, and has welded, watertight, box type members. The trailer is equipped with three leveling jacks, two in the front and one in the rear. The chassis is essentially the same chassis as the M514 except that the fenders and tool box assemblies are removed and five 4-inch C channels are welded to the top of the frame to provide a flush equipment mounting surface.

Differences among models

Data plate location

The identification plate is attached to the front of the chassis channel crossmember.

Classification: Standard A (OTCM 37240).

CHARACTERISTICS

Weight:	
Net	
Payload	
Gross	
Empty:	
Lunette eye	
Wheels	
Landing leg	
Length	$171\frac{7}{16}$ in.
Width	$90\frac{7}{16}$ in.
Height (empty)	67 in.
Height (loaded, top of frame to ground)	
Ground clearance	(min) 14 in.
Angle of approach	
Angle of departure	28 deg
Lunette height	4-way adjustable, 22, 26, 30, and 34 in.
Electrical system	24 volt
Tires:	
Size	9.00 x 20
Ply	8
Number	2
Pressure:	
Highway	45 psi
Cross-country	
Sand	
Tread, center to center	80 in.
Wheels:	
Manufacturer	Budd Co.
Rim size	20 x 7.375
Number of stud holes	6
Brakes (service):	
Actuation	air-over-hydraulic
Drum size	$13\frac{1}{8}$ in. dia x 2 in.
Type of brake mechanism	2 shoe, single cylinder actuation
Handbrakes:	
Actuation	mechanical
Hand lever assemblies:	
Location	under frame, each side
Number	2

PERFORMANCE

Maximum towed speed:	
Cross-country	25 mph
Highway	50 mph
Fording depth	entire

EQUIPMENT

Basic Issue Items: See TM 9-2330-236-15.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

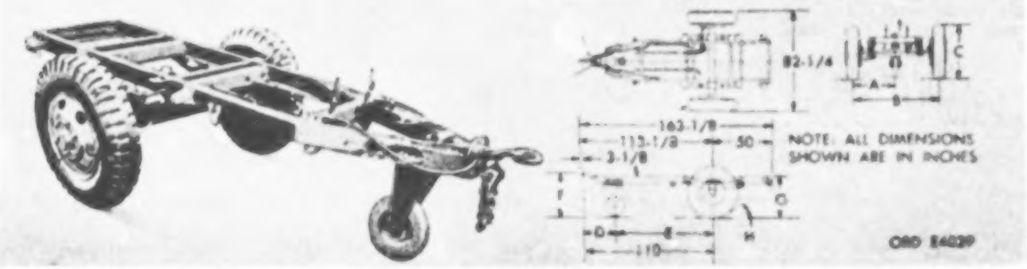
Shipped 1 chassis
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

References: LO 9-2330-239-10, TM 9-2330-236-15.

CHASSIS, TRAILER: 1½-TON, 2-WHEEL, M102, M102A1, M102A2, M102A3, AND M102A3C

VEH	A	B	C	D	E	Offset UP & DOWN	G	H
M102	34-13/16	69-5/8	42	22-1/4	87-3/4	29-3/4, 33-3/4	33	32
M102A1	34-13/16	69-5/8	42	27-1/2	82-1/2	35-3/8, 31-3/8	33-3/8	32
M102A2	34-13/16	69-5/8	42	27-1/2	82-1/2	35-3/8, 31-3/8	33-3/8	32

VEH	A	B	C	D	E	Offset UP & DOWN	G	H
M103A1	33-11/16	67-3/8	40	27-1/2	82-1/2	34-1/4, 30-1/8	32-1/8	30
M103A2	33-11/16	67-3/8	40	27-1/2	82-1/2	34-1/4, 30-1/4	33-1/4	30
M103A3	33-11/16	67-3/8	40	27-1/2	82-1/2	34-1/4, 30-1/4	32-1/4	30
M103A4	33-11/16	67-3/8	40	27-1/2	82-1/2	34-1/4, 30-1/4	32-1/4	30



Major item

Model	***Line item No.***	***Federal stock No.***
M102		2330-696-2529
M102A1		2330-696-2531
M102A2		2330-696-2532
M102A3		
M102A3C		

General

CHASSIS, TRAILER: 1½-ton, 2-wheel, M102, M102A1, M102A2, M102A3, and M102A3C, is suitable for mounting various bodies or equipment to provide trailers suitable for towing by single-tired TRUCK, CARGO: 2½-ton 6 x 6, M34* or M135.*

The chassis frame consists of pressed steel channel side rails, reinforced by six pressed steel channel crossmembers and two steel gussets, all welded into a single unit.

Main spring hangers and auxiliary spring contacting brackets are riveted to the frame side rails. Front and side lifting bars, tie-down loops, air brake hose coupling bracket, light brackets, and caster mounting bracket are welded to the nose of the frame.

The chassis is composed of a clean, flat top surface frame, drawbar, lunette with nonrotating, invertible, offset shank, landing gear composed of caster type landing wheel to support drawbar and permit movement of trailer when uncoupled from truck, service and parking brakes, tires and wheels, and an electrical system. The associated equipment includes safety chains, lifting handles, rear landing leg, and provisions for stowage.

Differences among models

CHASSIS, TRAILER: M102A1 is used to complete TRAILER, CARGO: 1½ ton, 2-wheel, M104A1**.

CHASSIS, TRAILER: M102A2 is used to complete TRAILER, TANK: water, 1½-ton, 2-wheel, 400-gal, M106A1**.

CHASSIS, TRAILER: M102 is used to complete TRAILER, WATER TANK: 1½-ton, 2-wheel, M106** and TRAILER, CARGO: 1½-ton, 2-wheel, M104**.

Data plant location

Identification plates are located on the right forward section of the steel channel side rails.

Classification

M102	Standard B (OTCM 36841)
M102A1	Standard B (OTCM 36876)
M102A2	Standard B (OTCM 36876)
M102A3	Standard B (OTCM 37119)
M102A3C	Standard B (OTCM 37119)

CHARACTERISTICS

M102, M102A1, M102A2:

Weight:	
Net	1,640 lb
Gross:	
Off highway	5,730 lb
On highway	8,230 lb
Empty:	
Lunette eye	180 lb
Axle	1,400 lb
Landing gear	240 lb
Tires:	
Size	11.00 x 20 in.
Ply	12
Number	
Pressure:	
Highway	
Cross-country	
Sand-driving	
Tread	69⅝ in.
Ground clearance	17⅛ in.
Lunette height (empty)	31⅝ or 35⅝ in.
Electrical system	24 volts
Brakes:	
Type	air-hydraulic
Drum size	15 dia. x 3
Parking brakes (type)	mechanical
Recommended towing vehicle	truck, 2½-ton, 6 x 6

PERFORMANCE

Maximum towing speed:	
Off highway	35 mph
On highway	55 mph
Capacity: (payload and body allowance)	
Cross-country (max)	4,500 lb
Highway (max)	6,000 lb
Angle of departure	45°
Slope operation:	
Longitudinal	60 percent
Side (min)	20 percent
Effective slope (parking brakes)	30 percent

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* For characteristics and data, see item in section 21.

** For characteristics and data, see items on pages 22-39 and 22-46.

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-754

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

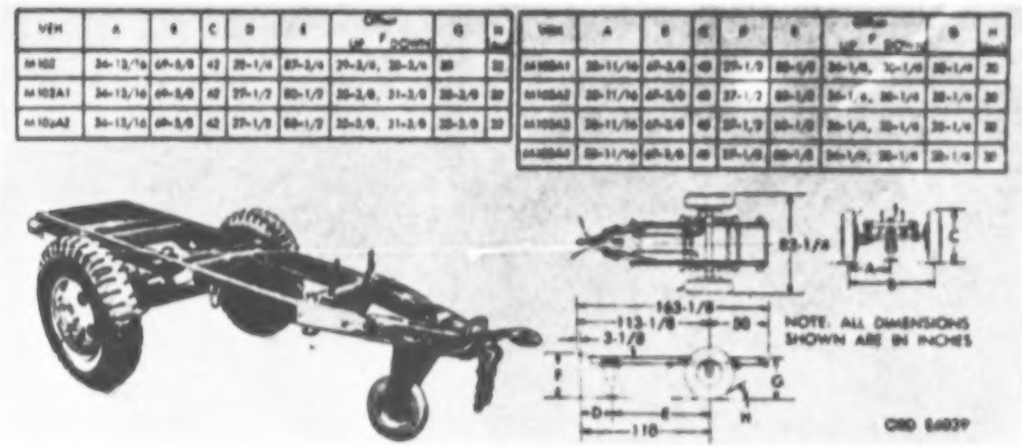
	M108A2	*M108A1*	*M108*
Shipped			
Length	....	....	163 in.
Width	....	....	82 in.
Height	....	....	42 in.
Volume	326 cu ft	326 cu ft	326 cu ft
Area	....	....	....
Gross weight	1,640 lb	1,640 lb	1,640 lb
Ship tons	....	....	....

Outside Continental United States

Shipped	
Length	....
Width	....
Height	....
Volume	....
Area	....
Gross weight	....
Ship tons	....

References: SNL G-754, TM 9-8226

CHASSIS, TRAILER: 1½-TON, 2-WHEEL, M103, M103A1, M103A2, M103A3, M103A3C, AND M103A4



Major item

Model	*Line item No.*	*Federal stock No.*
M103		
M103A1		2330-835-8629
M103A2		2330-049-8050
M103A3		2330-141-8052
M103A3C		2330-542-2181
M103A4		2330-141-8051

General

CHASSIS, TRAILER: 1½-ton, 2-wheel, M103, is suitable for mounting various bodies or equipment to provide trailers suitable for towing by dual rear-tired 2½ ton, 6 x 6M-series trucks.

The chassis frame consists of pressed steel channel side rails, reinforced by six pressed steel channel crossmembers and two steel gussets, all welded into a single unit.

Main spring hangers and auxiliary spring contacting brackets are riveted to the frame side rails. Front and side lifting bars, tie-down loops, air brake hose coupling bracket, light brackets, and caster mounting bracket are welded to the nose of the frame.

The chassis is composed of a clean, flat top surface frame, drawbar lunette with nonrotating, invertible, offset shank, landing gear composed of caster type landing wheel to support drawbar and permit movement of trailer when uncoupled from truck, service and parking brakes, tires and wheels, and an electrical system.

Differences among models

CHASSIS, TRAILER: M103A1 is used to complete TRAILER, CARGO: 1½-ton, 2-wheel, M105A1.*

The M103A2 is basically the same chassis as the M103A1 with the exception of 6 additional holes for mounting of water tank to complete TRAILER, TANK: water, M107A1.*

CHASSIS, TRAILER: M103A3 is used to complete TRAILER, CARGO: 1½-ton, 2-wheel, M105A2.*

CHASSIS, TRAILER: M103A4 is basically the same chassis as the M103A2 with the same exceptions for mounting of water tank to complete TRAILER, TANK: water, M107A2.*

Data plate location

Identification plates are located on the forward section of the steel channel right side rail.

Classification

M103	Standard B (OTCM 36841)
M103A1	Standard B (OTCM 36876)
M103A2	Standard B (OTCM 36876)
M103A3	Standard A (OTCM 36876)
M103A3C	Standard B (OTCM 37119)
M103A4	Standard A

CHARACTERISTICS

Weight	
M103A1, M103A2	Net 1,560 lb
M103A3, M103A4	Net 1,660 lb
Gross	
Off highway	5,650 lb
On highway	7,150 lb
Weight distribution (empty):	
Lunette eye	200 lb
Axle M103, M103A1, M103A2	1,380 lb
M103A3, M103A4	1,472 lb
Landing gear	240 lb
Tires	
Size	9.00 x 20
Pressure	50 psi
Ply	8
Tread	67⅝ in.
Vehicle Dimensions	
Ground Clearance	16⅛ in.
Lunette height (empty)	30⅛ or 34⅛ in.
Electrical system	24v
Brakes	
Type	air-hydraulic
Drum size	15 dia x 3
Parking brakes (type)	mechanical
Recommended towing vehicle	truck, 2½-ton, 6 x 6

PERFORMANCE

Maximum towing speed:	
Off highway	35 mph
On highway	55 mph
Capacity (payload and body allowance):	
Cross-country (max)	4,500 mph
Highway (max)	6,000 mph
Angle of departure	45°
Slope operation:	
Longitudinal	60 percent
Side (Minimum)	20 percent
Effective slope (parking brakes)	30 percent

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* For characteristics and data, see items on pages 22-59 and 22-71.

EQUIPMENT

Basic Issue Items: See TM 9-2330-245-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

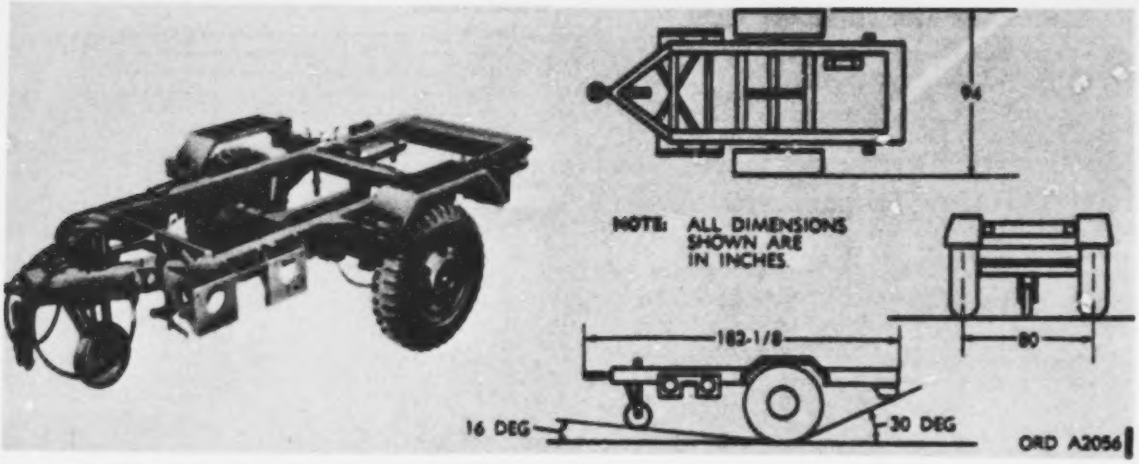
	M103A3	*M103A4*	*M103A2*	*M103A1*
Shipped				
Length	---------	---------	---------	164 in.
Width	---------	---------	---------	80 in.
Height	---------	---------	---------	39 in.
Volume	310 cu ft	310 cu ft	310 cu ft	310 cu ft
Area	---------	---------	---------	---------
Gross weight	1,560 lb	1,560 lb	1,560 lb	1,560 lb
Ship tons	---------	---------	---------	---------

Outside Continental United States

Shipped
Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

References: SNL G-754, TM 9-8226, TM 9-2330-245-24P

CHASSIS, TRAILER: 2½-TON, 2-WHEEL, M454



Model	*Line item No.*	*Federal stock No.*
M454	----------------------------------	2330-709-5847

General

CHASSIS, TRAILER: 2½-ton, 2-wheel, M454 consists essentially of a heavy duty frame supported by an axle through leaf springs and a retractable caster at the front. The frame is rectangular in shape with an "A" shaped extension at the front for monitoring the caster and lunette. Fenders over the two wheels are hinged, and the tops of the fenders may be turned outward and down to a position so they are located outside the upper portion of the tires.

The chassis is used as a component of Radar Set AN/MPQ-4.

Differences among models

Data plate location

The identification plate is located on each side of the "A" frame near the front end.

Classification: Standard A (OTCM 36876).

CHARACTERISTICS

Prime mover	
Weight:	
Net	2,160 lb
Payload	
Gross	
Length, overall	182.12 in.
Width	94 in.
Height (loaded) (to top of tire)	39 in.
Lunette height	2 way adjustable
Ground clearance	
Angle of approach	16 deg
Angle of departure	30 deg
Tread, center to center	80 in.
Axle:	
Manufacturer	Visioneering Co.
Number	1
Type	tubular
Diameter	4½ in.
Service brake:	
Actuation	air/hydraulic
Manufacturer	
Type	
Size	15 in. dia x 3 in. wide
Relay emergency valve	Bendix Westinghouse
Handbrakes:	
Actuation	manual
Lever assemblies:	
Location	under frame 84 inches from lunette eye
Manufacturer	Bringham Stamping Div
Number	2
Brake valve	Bendix Westinghouse
Springs:	
Manufacturer	
Type	semielliptical, leaf
Length, overall at free height	
Width	2.5 in.
Number of leaves	14
Rate of deflection	
Wheels:	
Manufacturer	Motor Wheel Corp
Rim size	20 x 7.5 in.
Number of stud holes	6
Tires:	
Number	2
Type	military
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 lb
Cross-country	35 lb
Sand	15 lb
Electrical system	24 volt
Taillights	32 cp and 3 cp
Clearance lights	3 cp
Caster:	
Manufacturer	Saginaw Products Co.
Type	modified-single wheel

PERFORMANCE

Maximum speed (w/maximum payload):	
Highway	
Unimproved roads	
Cross-country	

EQUIPMENT

Basic Issue Items:

best copy available

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis

Length --

Width ---

Height --

Volume ---------------------------------------

Area --

Gross weight ---------------------------------

Ship tons ------------------------------------

Outside Continental United States

Shipped 1 chassis

Length --

Width ---

Height --

Volume ---------------------------------------

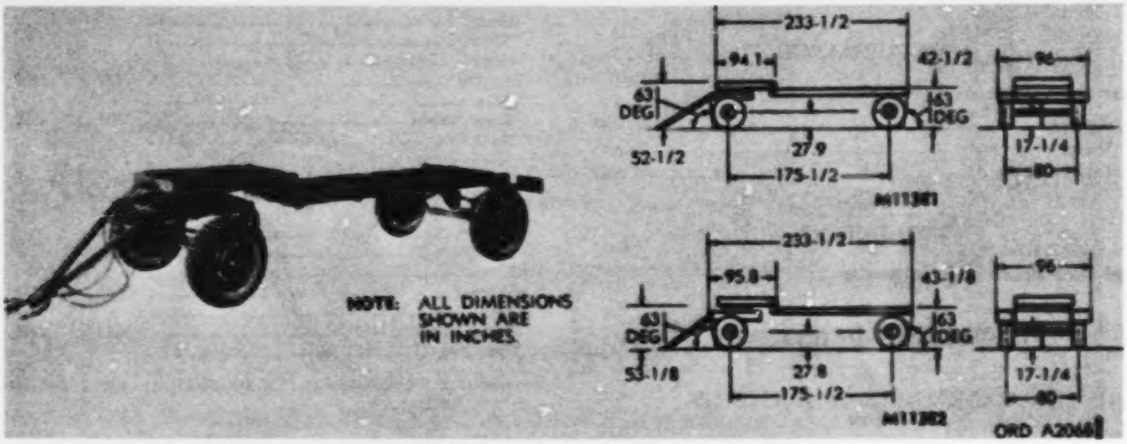
Area --

Gross weight ---------------------------------

Ship tons ------------------------------------

Reference: TM 9-2330-234-15.

CHASSIS, TRAILER: 3-TON, 4-WHEEL, XM113E1 AND XM113E2



Model	*Line item No.*	*Federal stock No.*
XM113E1		2330-542-5986
XM113E2		2330-646-7638

General

CHASSIS, TRAILER: 3-ton, 4-wheel, XM113E1 or XM113E2 consists of a front frame, rear frame, two tubular axles with single wheels and spring suspension. The chassis also has a drawbar and lunette for attachment to a vehicle equipped with towing pintle.

The chassis is designed for mounting a removable van body or low-bed deck, and to be towed by TRUCK, CARGO: 2½-ton, 6x6, M35 or M211, or similar vehicle equipped with electrical outlet and airbrake hose couplings.

Differences among models

The springs for the XM113E1 consists of six leaves. The springs for the XM113E2 consist of eight leaves.

Data plate location

The identification plate is mounted on the front cross member of the rear frame.

Classification:

CHARACTERISTICS

Prime mover	TRUCK, CARGO: 2½-ton, 6x6, M35 or M211, or equal
Weight:	
Net:	
XM113E1	3,880 lb
XM113E2	4,020 lb
Payload:	
XM113E1	7,620 lb
XM113E2	9,620 lb
Gross:	
XM113E1	11,500 lb
XM113E2	13,640 lb
Length (w/o drawbar)	233½ in.
Kingpin to rear axle	174⅝ in.
Width	96 in.
Height	52 in.
Ground clearance	17¼ in.
Angle of approach	63 deg
Angle of departure	63 deg
Trend, center to center	80 in.
Axle:	
Manufacturer	Visioneering Co, Inc
Number	2
Type	tubular
Diameter	4½ in.
Spindle (diameter)	2⅝ in.
Service brake:	
Actuation	air-over-hydraulic
Design	Wagner-Midland
Type	2 shoe, self-centering, expanding double cylinder actuation
Size	15 in. dia x 3 in. wide
Operating air pressure (min)	65 psi
Parking brakes:	
Actuation	mechanical (hand levers)
Lever assemblies:	
Location	front and rear frame
Manufacturer	Orschein Brake Lever Mfg Co.
Number	2
Springs:	
Manufacturer	Spring Perch Co., Inc.
Type	semielliptical, leaf
Length overall at free height of 7 in. (XM113E1)	51⅝ in.
Length overall at free height of 5¼ in. (XM113E2)	52⅜ in.
Width	3½ in.
Number of leaves:	
XM113E1	6
XM113E2	8
Thickness of leaves:	
Leaves 1, 2 (XM113E1)	0.323 in.
Leaves 3-6 (XM113E1)	0.291 in.
Leaves 1-8 (XM113E2)	0.323 in.
Rate of deflection	475 lb per in.
Wheels:	
Manufacturer	Budd Co.
Rim size	20 x 7.5 in.
Number of stud holes	6
Tires:	
Number	4
Type	military pneumatic ozone
Size	9.00 x 20
Ply	8
Pressure:	
Highway	45 psi
Cross-country	
Sand	

Electrical system	24 volt
Taillights	32 cp and 3 cp
Blackout stoplight	3 cp

PERFORMANCE

Maximum speed (w/maximum payload):

Highway	50 mph
Unimproved roads	25 mph
Cross-country	15 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-239-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis

	M118E1	M118E2
Length		
Width		
Height		
Volume	681	689
Area		
Gross weight	3880	4020
Ship tons		

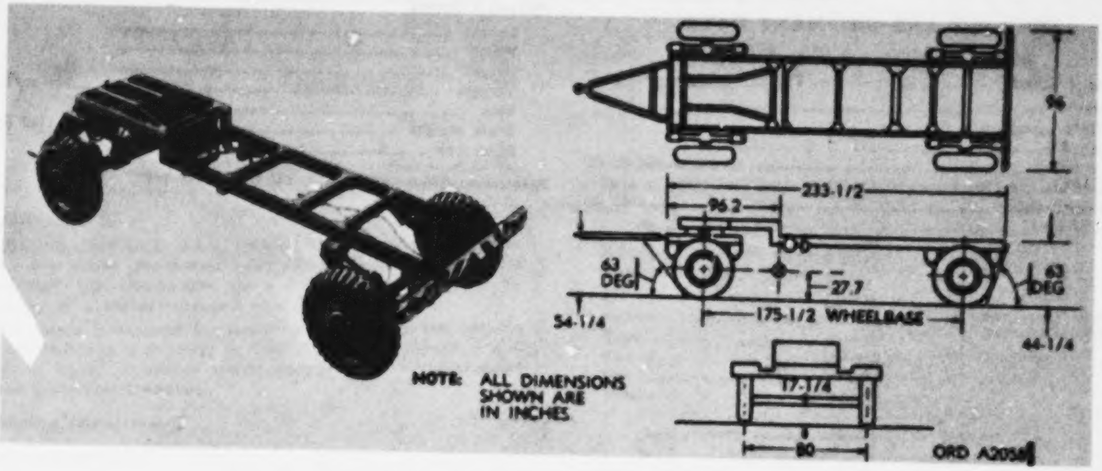
Outside Continental United States

Shipped 1 chassis

	M118E1	M118E2
Length		
Width		
Height		
Volume	681	689
Area		
Gross weight	3880	4020
Ship tons		

References: LO 9-2330-239-10, TM 9-2330-239-14, TM 9-2330-239-24P.

CHASSIS, TRAILER: 5-TON, 4-WHEEL, XM456



Model	*Line item No.*	*Federal stock No.*
XM456		2330-542-5988

General

CHASSIS, TRAILER: 5-ton, 4-wheel, XM456 consists of a front frame, rear frame, two tubular axles with single wheels and spring suspension. The chassis also has a drawbar and lunette for attachment to a vehicle equipped with towing pintle.

The chassis is designed for mounting a removable van body or low-bed deck, and to be towed by TRUCK, CARGO: 2½-ton, 6x6, M35 or M211, or similar vehicle equipped with electrical outlet and airbrake hose couplings.

Differences among models

Data plate location

The identification plate is mounted on the front cross member of the rear frame.

Classification:

CHARACTERISTICS

Prime mover	TRUCK, CARGO: 2½-ton, 6x6, M35 or M211, or equal
Weight:	
Net	4,280 lb
Payload	11,620 lb
Gross	15,900 lb
Length (w/o drawbar)	233½ in.
Kingpin to rear axle	174⅝ in.
Width	96 in.
Height	53⅝ in.
Ground clearance	17¼ in.
Angle of approach	63 deg
Angle of departure	63 deg
Tread	80 in.
Axle:	
Manufacturer	Visioneering Co., Inc.
Number	2
Type	tubular
Diameter	4½ in.
Spindle (diameter)	2⅝ in.
Service brake:	
Actuation	air-over-hydraulic
Design	Wagner-Midland
Type	2 shoe, self-centering, expanding double cylinder actuation
Size	15 in. dia x 3 in. wide
Operating air pressure (min)	65 psi
Parking brake:	
Actuation	mechanical (hand levers)
Lever assemblies:	
Location	front and rear frame
Manufacturer	Orschein Brake Lever Mfg Co.
Number	2
Springs:	
Manufacturer	Spring Perch Co., Inc
Type	semielliptical, leaf
Width	3½ in.
Length overall at free height of 5⅝ in.	52¾ in.
Number of leaves	10
Rate of deflection	1,525 lb per in.
Wheels:	
Manufacturer	Budd Co.
Rim size	20 x 7.5 in.
Number of stud holes	6
Tires:	
Type	military pneumatic ozone
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross-country	
Sand	
Number	4
Electrical system	24 volt
Taillights	32 cp and 3 cp
Blackout stoplight	3 cp

PERFORMANCE

Maximum speed (w/maximum payload):	
Highway	50 mph
Unimproved roads	25 mph
Cross-country	15 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-239-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis

Length	
Width	
Height	
Volume	704 cu ft
Area	
Gross weight	4280 lb
Ship tons	

Outside Continental United States

Shipped 1 chassis

Length	
Width	
Height	
Volume	704 cu ft
Area	
Gross weight	4280 lb
Ship tons	

References: TM 9-2330-239-14, TM 9-2330-239-24P.

CHASSIS, TRAILER: 5-TON, 4-WHEEL, XM525

(Illustration will be added at a later date)

Model	*Line item No.*	*Federal stock No.*
XM525		2330-786-5355

General

CHASSIS, TRAILER: 5-ton, 4-wheel, XM525 consists of a front frame, rear frame, two tubular axles with single wheels and spring suspension. The chassis also has a drawbar and lunette for attachment to a vehicle equipped with towing pintle.

The chassis is designed for mounting a removable van body or low-bed deck, and to be towed by TRUCK, CARGO: 2½-ton, 6 x 6, M35 * or M211 * or similar vehicle equipped with electrical outlet and airbrake hose couplings.

Differences among models

Data plate location

The identification plate is mounted on the front cross member of the rear frame.

CHARACTERISTICS

Prime mover	TRUCK, CARGO: 2½-ton, 6 x 6, M35 or M211, or equal
Weight:	
Net	4,400 lb
Payload	11,620 lb
Gross	16,020 lb
Length (w/o drawbar)	233½ in.
Kingpin to rear axle	174⅝ in.
Width	96 in.
Height	53⅝ in.
Ground clearance	17¼ in.
Angle of approach	63 deg
Angle of departure	63 deg
Tread	80 in.
Axle:	
Manufacturer	Visioneering Co., Inc
Number	2
Type	tubular
Diameter	4½ in.
Spindle (diameter)	2⅝ in.
Service brake:	
Actuation	air-over-hydraulic
Design	Wagner-Midland
Type	2 shoe, self-centering, expanding double cylinder actuation
Size	15 in. dia x 3 in. wide
Operating air pressure (min)	65 psi
Parking brake:	
Actuation	mechanical (hand levers)
Lever assemblies:	
Location	front and rear frame
Manfuacturer	Orschein Brake Lever Mfg Co.
Number	2
Springs:	
Manufacturer	Spring Perch Co., Inc
Type	semielliptical, leaf
Width	3½ in.
Length overall at free height of 5⅝ in.	52⅝ in.
Number of leaves	10
Rate of deflection	1,525 lg per in.
Wheels:	
Manufacturer	Budd Co.
Rim size	20 x 7.5 in.
Number of stud holes	6
Tires:	
Number	4
Type	military pneumatic ozone
Size	11.00 x 20
Ply	12
Pressure:	
Highway	70 psi
Cross-country	
Sand	
Electrical system	24 volt
Taillights	32 cp and 3 cp
Blackout stoplight	3 cp

* For characteristics and data, see item in section 21.

PERFORMANCE

Maximum speed (w/max payload):	
Highway	50 mph
Unimproved roads	25 mph
Cross-country	15 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-239-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

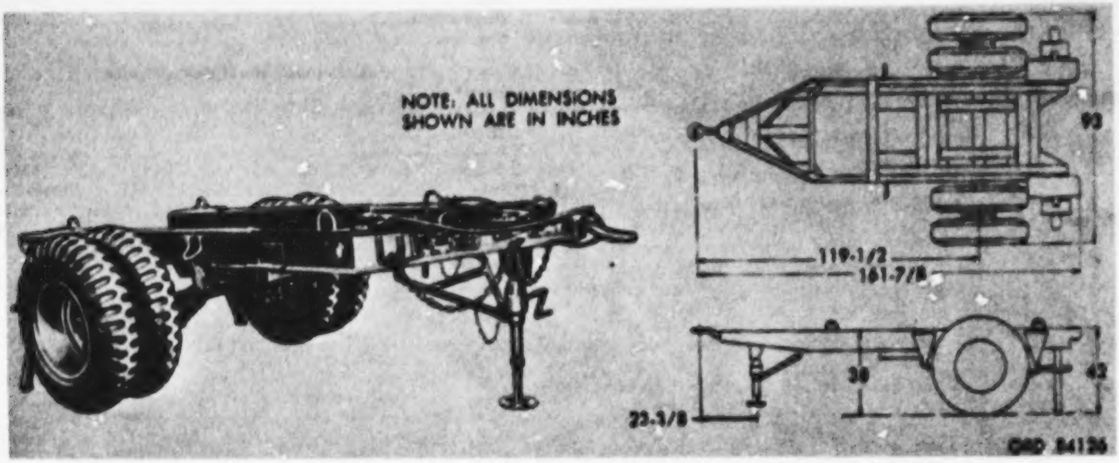
Outside Continental United States

Shipped 1 chassis.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-239-14, TM 9-2330-239-24P.

CHASSIS, TRAILER: GENERATOR, 2½-TON, 2-WHEEL, M200 and M200A1



Major item

Model	*Line item No.*	*Federal stock No.*
M200 w/e	4-05638-10	2330-835-8690
M200A1 w/e	4-05638-20	2330-331-2307

General

CHASSIS, TRAILER: generator, 2½-ton, 2-wheel, M200 and M200A1 consists of a frame onto which are secured two generator mounting support assemblies, which are used for mounting a generator; two step jacks extending downward from the rear of the frame; a retractable landing leg assembly used for support of the front end or nose of the vehicle when uncoupled; and a conventional tubular trailer axle with dual wheels and a spring suspension. The chassis is further provided with a lunette at the front end of the frame for attachment to a vehicle equipped with a drawbar or towing pintle.

The trailer chassis has been designed to be towed over prepared roads with loads of 6,200 pounds at speeds as high as 55 mph and to be towed over unimproved roads, trails, and open rolling terrain with loads to 6,200 pounds at speeds as high as 30 mph. Also, it has been designed for fording hard-bottom water crossings. The chassis is designed to be towed by the TRUCK, CARGO: 2½-ton 6 x 6 M34* or similar vehicle. The lunette end of the trailer chassis is in the front and the step jacks are in the rear.

Differences among models

The early type chassis M200 is equipped with a commercial axle and has air brakes. The late type chassis M200A1 is equipped with an Ordnance axle and has air-over-hydraulic brakes.

Data plate location

The identification plate for the chassis is located on the right front of the frame side rail. The service plate is located on the right front of the frame side rail, just to the front of the data plate.

Classification

M200 .... Standard B (OTCM 36841)
M200A1 .... Standard A (OTCM 36841)

CHARACTERISTICS

Weight:
- Net .... 2,410 lb
- Payload .... 7,000 lb
- Gross .... 9,410 lb

Angle of departure .... 30°

Center of gravity from ground:
- Empty .... 1 ft, 10½ in.
- Loaded .... 3 ft, 3 in.

Lunette height (adjustable) .... 2 ft, 6 in. and 2 ft, 10 in.

Chassis frame length:
- To center of lunette .... 13 ft. 9¼ in.
- Without lunette .... 12 ft. 9¼ in.
- Side rail (depth) .... 6 in.
- Width .... 3 ft. 7½ in.
- Axle:
  - Diameter .... 4½ in.
  - Spindle (dia) .... 2¹¹⁄₁₆ in.
  - Type .... Tubular

Springs:
- Material .... Steel alloy
- No. of leaves 14
- Thickness of leaves .... ⅝ in.
- Type .... semielliptical
- Width .... 2½ in.

Brakes:
- Actuation .... air-over-hydraulic
- Operating air pressure .... 60 psi
- Size:
  - Diameter .... 16.0705 in.
  - Width .... 3 in.
- Brake mechanism ..... 2 shoe, self-centering, expanding double cylinder

Handbrakes:
- Actuation .... mechanical
- Assemblies 2

Tires:
- Number 4
- Ply 8
- Size .... 9.00 x 20
- Inflation:
  - Cross-country .... 45 psi
  - Highway driving .... 45 psi
  - Mud, snow, or sand .... 15 psi

Tread:
- Inner .... 57½ in.
- Outer .... 82½ in.

Wheels:
- Dia of stud circle .... 8.748 in
- No. of studs 6
- Rim size .... 20 x 7.5

Landing Leg:
- Length:
  - Fully extended .... 31 in.
  - Fully retracted .... 23 in.
- Type .... hinged, screw-controlled telescopic

Lights (voltage) .... 24 volts

---

* For characteristics and data, see item in section 21.

PERFORMANCE

Payload	6,200 lb
Towing speed:	
Highway	55 mph
Unimproved roads	30 mph

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-756

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

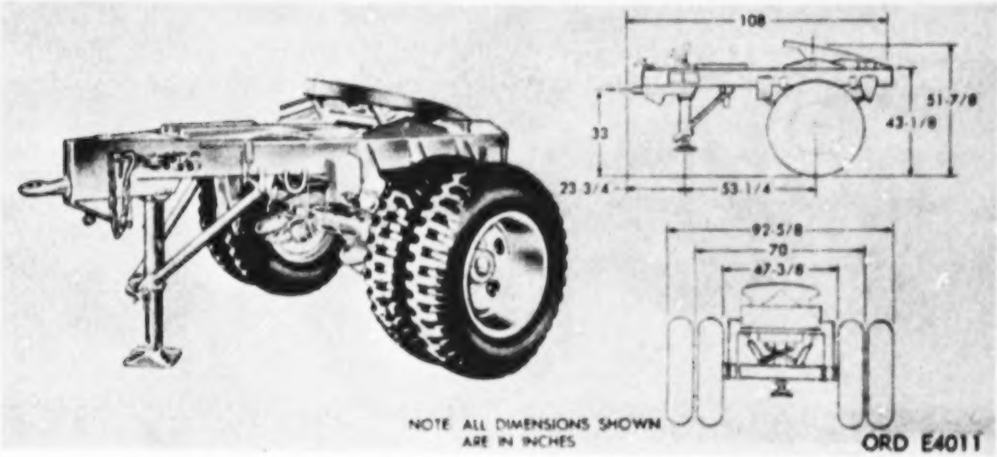
Shipped	
Length	165 in.
Width	93 in.
Height	40 in.
Volume	366 cu ft
Area	106.6 sq ft
Gross weight	2,150 lb
Ship tons	9.15

Outside Continental United States

Shipped	
Length	165 in.
Width	93 in.
Height	40 in.
Volume	366 cu ft
Area	106.6 sq ft
Gross weight	2,150 lb
Ship tons	9.15

References: SNL G-756, TM 9-8210, TM 5-9057

DOLLY, TRAILER CONVERTER: 6-TON, 2-WHEEL, M197 AND M197A1



NOTE ALL DIMENSIONS SHOWN ARE IN INCHES

ORD E4011

Major item

Model	*Line item No.*	*Federal stock No.*
M197	4-12622-05	2330-835-8615
M197A1	4-12622-09	2330-569-0782

General

DOLLY, TRAILER CONVERTER: 6-ton, 2-wheel, M197 and M197A1, is used to convert 6-ton series semitrailers into full trailers.

The dollies are designed with a fifth wheel for attachment to the front underside of a semitrailer. A lunette at the front of the dolly provides an attachment to the towing vehicle. The dollies can be towed over prepared roads and rough terrain with a load of 12,000 pounds. They are designed for fording hard-bottom water crossings where the dolly may be completely submerged.

Each dolly contains two air hose and electrical intervehicular cables in a stowage compartment. Each dolly is equipped with a landing gear assembly and hand crank, two safety chains, and four reflectors.

Differences among models

Dolly M197 is equipped with a commercially designed axle and has air brakes. Dolly M197A1 is equipped with an Ordnance designed axle and has air-over-hydraulic brakes.

Data plate location

The data identification plate is attached to the side frame near the front end of the dolly.

Classification

M197—Standard B (OTCM 36876)
M197A1—Standard A (OTCM 36876)

CHARACTERISTICS

Weight:	
Net	2,970 lb
Payload	12,000 lb
Gross	14,970 lb
Weight distribution:	
Empty	Axle 2,730; lunette 240 lb
Loaded	Axle 14,574; lunette 396 lb
Tires:	
Ply	8
Size	9.00 x 20
Vehicle dimensions:	
Length	112 in.
Width	92⅝ in.
Height	51⅞ in.
Ground clearance	17⅝ in.
Height to center of fifth wheel	51⅞ in.
Fifth wheel	(size) 34 in.
Brakes:	
Manufacturer	Midland
Type	S cam, 2 shoe
Parking brake	none
Tire inflation:	
Highway driving	45 psi
Cross country driving	45 psi
Snow, mud, and sand driving	15 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-800.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

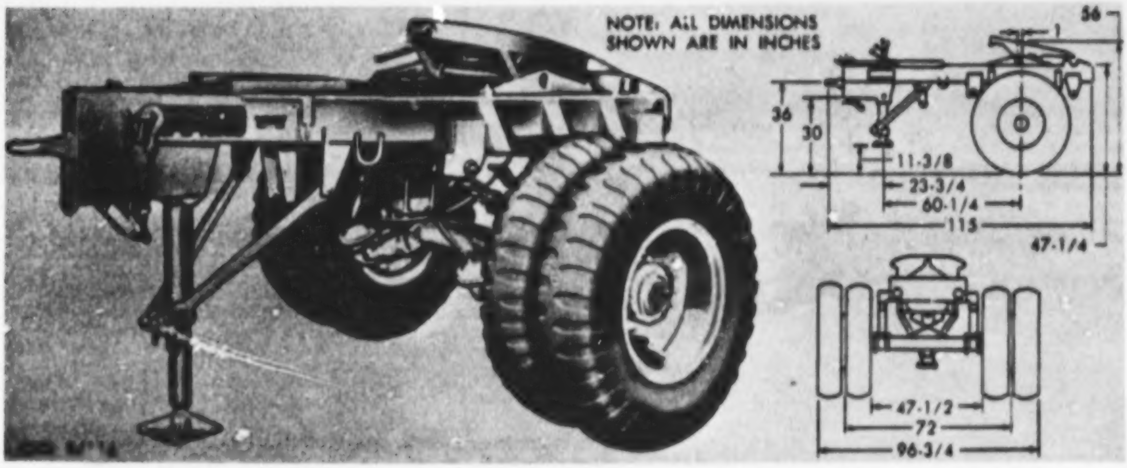
	M197A1	*M197*
Shipped		
Length		112 in.
Width		93 in.
Height		50 in.
Volume		312 cu ft
Area		
Gross weight		2,970 lb
Ship tons		

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-800, TM 9-8202, TM 9-2330-203-14.

DOLLY, TRAILER CONVERTER: 8-TON, 2-WHEEL, M198 AND M198A1



Major item

Model	*Line item No.*	*Federal stock No.*
M198	4-12625-10	2330-287-5203
M198A1	4-12625-20	2330-563-7248

General

DOLLY, TRAILER CONVERTER: 8-ton, 2-wheel, M198 and M198A1, is used to convert semitrailers into 4-wheel 20- to 25-ton capacity trailers.

The dollies are designed with a fifth wheel for attachment to the front underside of a semitrailer. A lunette at the front of the dolly provides an attachment to the towing vehicle. The dollies can be towed over prepared roads and rough terrain with a load of 16,000 pounds. They are designed for fording hard-bottom water crossings where the dolly may be completely submerged.

Each dolly contains two air hose and electrical intervehicular cables in a stowage compartment. Each dolly is equipped with a landing gear assembly and hand crank, two safety chains, and four reflectors.

Differences among models

Dolly M198 is equipped with a commercially designed axle and has air brakes. Dolly M198A1 is equipped with an Ordnance designed axle and has air-over-hydraulic brakes.

Data plate location

The data identification plate is attached to the side frame near the front end of the dolly.

Classification

M198— STANDARD B (OTCM 36876)
M198A1—STANDARD A (OTCM 36876)

CHARACTERISTICS

Weight:	
Net	3,500 lb
Payload	16,000 lb
Gross	19,500 lb
Weight distribution:	
Empty	axle 3,150; lunette 300 lb
Loaded	axle 18,958; lunette 492 lb
Tires:	
Ply	12
Size	11.00 x 20
Tread: center to center	72 in.
Length	120 in.
Width	96¾ in.
Height	82 in.
Ground clearance	19 in.
Height to center of fifth wheel	56 in.
Fifth wheel	(size) 34 in.
Brakes:	
Manufacturer	Midland
Type	S cam 2 shoe
Tire Inflation:	
Highway driving	50 psi
Cross country driving	35 psi
Snow, mud, and sand driving	20 psi

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-800.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

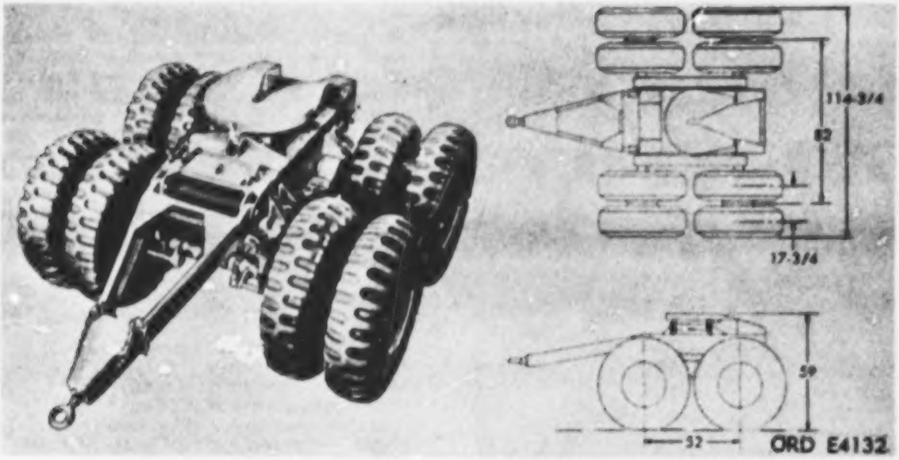
Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: TM 9-8202, TM 9-2330-203-14, SNL G-800.

DOLLY, TRAILER CONVERTER: 18-TON, 4-WHEEL, M199



ORD E4132

Major item

Model	***Line item No.***	***Federal stock No.***
M199	4-12658-10	2330-835-8676

General

DOLLY, TRAILER CONVERTER: 18-ton 4-wheel, M199, is used to convert a semitrailer into a full trailer and permit transporting by any prime mover.

The trailer converter dolly M199 consists of a frame, mounting a fifth wheel for coupling to the semitrailer, and is mounted on dual tandem axles with dual wheels and spring chassis. A drawbar and lunette are provided at the front of the frame for towing the vehicle either independently or coupled to a semitrailer. No landing gear is required. The dolly is equipped with airbrake system and electrical system.

Differences among models

Data plate location

Name and service plates are mounted on the left side of frame.

Classification: STANDARD B (OTCM 37251)

CHARACTERISTICS

Curbweight	7,700 lb
Weight distribution:	
Axle	43,700 lb.
Gross weight including body and payload:	
Cross country	31,700 lb
Highway	43,700 lb
Lunette data:	
Height empty	58 in.
To centerline of axle or bogie	95 in.
To fifth wheel center	95 in.
Bogie wheel base	52 in.
Minimum ground clearance	19 in.
Tread, center-to-center	82 in.
Springs:	
Size	5 x 59½ in.
No of leaves	12
Wheels	duals
Tires:	
Size	14.00 x 20
Ply	12
Tread design	NDCC
Recommended pressure	85 psi
Service brakes:	
Drum size	16½ dia x 7.5w
Actuation	air
Emergency relay valve	external
Air reservoir	external
Parking brake:	
Actuation	air
Mounting	axle
Max towing speed (mph):	
Cross-country	variable
Highway	variable
Electrical system (voltage)	24 volts

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-811.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

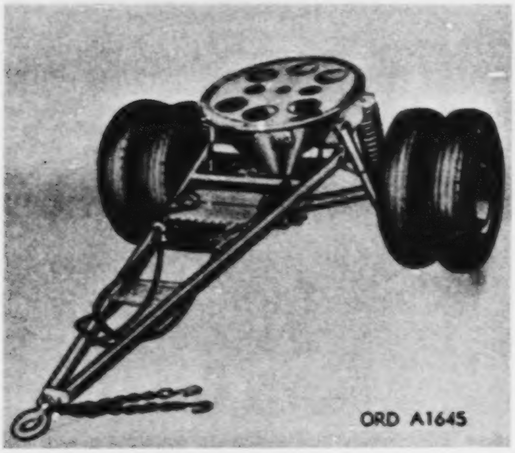
Shipped	
Length	150 in.
Width	115 in.
Height	58 in.
Volume	(Uncrated) 579 cu ft
Area	(Uncrated) 120 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8228, SNL G-811.

DOLLY, TRAILER, FRONT: M429, M429A, M429A1, M429C, M429A1C, M429D, M429A1D, M429F, M429A1F, M429A1G, M429H, M429A1H, M429K, M429A1K, M429N, AND M429A1N



Major item

(Shown: Typical dolly, trailer)

Model	*Line item No.*	*Federal stock No.*
M429		2330-626-3367
M429A		2330-626-3403
M429A1		2330-626-3369
M429C		2330-626-3390
M429A1C		2330-626-3401
M429D	4-12673-10	2330-626-3337
M429A1D	4-12673-01	2330-626-3339
M429F	4-12671-01	2330-626-3359
M429A1F	4-12671-01	2330-626-3347
M429A1G		2330-626-3406
M429H		2330-626-3416
M429A1H		2330-626-3418
M429K	4-12672-02	2330-626-3363
M429A1K	4-12672-01	2330-626-3365
M429N		2330-626-3422
M429A1N		2330-626-3361

General

DOLLY, TRAILER, FRONT: M429, M429A, M429A1, M429C, M429A1C, M429D, M429A1D, M429F, M429A1F, M429A1G, M429H, M429A1H, M429K, M429A1K, M429N, or M429A1N, is used to support the front end of the nonreversible trailer on a pivoting dolly assembly.

The front trailer dolly M429 series consists of a cone-shaped steel fifth-wheel assembly; front wheel spring suspension having a V-shaped arm assembly used to connect the front dolly to the towing vehicle, wheel assemblies, electric or hydraulic brakes, and tires and tubes. Brakes are controlled by the operator in the towing vehicle. If the trailer becomes disconnected from the towing vehicle during travel, the brakes are applied automatically. Each front dolly requires four 9.00 by 16 (8-ply rating), ribtread, highway design type tires, mounted on dual-wheel rims.

The front trailer dolly M429 or M429A1 is a component of TRAILER, VAN: fire control mount, 3-ton, 4-wheel, M242 or M242A1;* M429C or M429A1C is a component of TRAILER, VAN: fire control, 2-ton, 4-wheel, M244 or M244A1;* M429D or M429A1D is a component of TRAILER, VAN: radar tracking, control, M258 or M258A1;* M429F or M429A1F is a component of TRAILER, VAN: director station, M259 or M259A1;* M429A or M429A1G is a component of TRAILER, LOW-BED: antenna mount, M260 or M260A1;* M429H or M429A1H is a component of TRAILER, FLAT BED: guided missile, M261 or M261A1;* M429K, M429A1K, or M429A1G is a component of TRAILER, VAN: launching control, M262, M262A1, or M262A1C;* and M429N or M429A1N is a component of TRAILER, VAN: electric shop, 2½-ton, 4-wheel, M359 or M359A1.*

Differences among models

Data plate location

Classification

M429—Standard B (OTCM 36841)
M429A—Limited Standard
M429A1—Standard B (OTCM 36841)
M429C—Standard B (OTCM 36841)
M429A1C—Standard B (OTCM 36841)
M429D —Standard B (OTCM 36841)
M429A1D—Standard A (OTCM 36841)
M429F —Standard B (OTCM 36841)
M428A1F—Standard A (OTCM 36841)
M429A1G—Standard A (OTCM 36841)
M429H —Standard B (OTCM 36841)
M429A1H—Standard A (OTCM 36841)
M429K —Standard B (OTCM 36841)
M429A1K—Standard A (OTCM 36841)
M429N —Standard B (OTCM 36841)
M429A1N—Standard A (OTCM 36841)

CHARACTERISTICS*

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 front trailer dolly per box.

Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

Outside Continental United States

Shipped 1 front trailer dolly per box.

Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

References: TM 9-2330-232-14, TM 9-2330-212-24P

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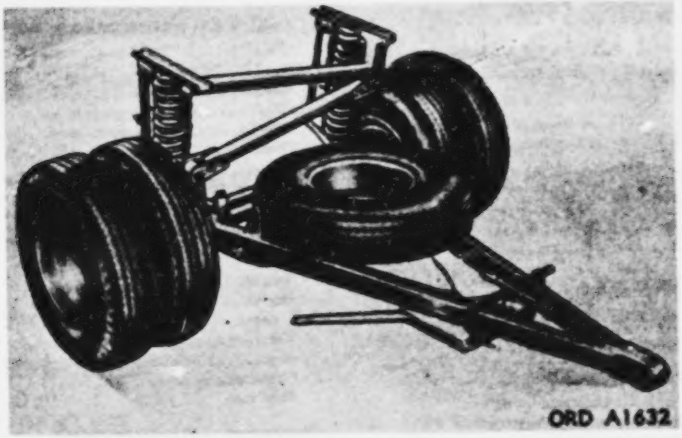
*For characteristics and data, see items on pages 22-66, 22-73 through 22-80.

DOLLY, TRAILER, REAR: M430, M430A1, M430C, M430A1C, M430D, M430A1D, M430F, M430A1F, M430G, M430A1G, M430H, M430A1H, M430K, M430A1K, M430N, AND M430A1N



Major item

(Shown: Typical dolly, trailer)

Model	*Line item No.*	*Federal stock No.*
M430		2330-626-3368
M430A1		2330-626-3371
M430C		2330-626-3399
M430A1C		2330-626-3402
M430D	4-12677-10	2330-626-3338
M430A1D	4-12677-01	2330-626-3345
M430F	4-12674-02	2330-626-3360
M430A1F	4-12674-01	2330-626-3350
M430G		2330-626-3404
M430A1G		2330-626-3407
M430H		2330-626-3417
M430A1H		2330-626-3419
M430K	4-12675-10	2330-626-3364
M430A1K	4-12675-01	2330-626-3366
M430N		2330-626-3424
M430A1N		2330-626-3362

General

DOLLY, TRAILER, REAR: M430, M430A1, M430C, M430A1C, M430D, M430A1D, M430F, M430A1F, M430G, M430A1G, M430H, M430A1H, M430K, M430A1K, M430N, or M430A1N, is used to support the rear end of the nonreversible trailer. The rear trailer dolly, M430 series consists of a welded stéel A-frame, rear wheel spring suspension, wheel assemblies, brakes, tires, and tubes. A spare wheel is mounted on the A-frame. A mechanical parking brake located in the A-frame is used to actuate the brakes when the trailer is emplaced on at-the-halt. Brakes are controlled by the operator in the towing vehicle. If the trailer becomes disconnected from the towing vehicle during travel, the brakes are applied automatically. Each rear dolly requires four 9.00 by 16 (8-ply rating), rib-treated highway design type tires, mounted on dual-wheel rims.

The rear trailer dolly M430 or M430A1 is a component of TRAILER, VAN: fire control mount, 3-ton, 4-wheel, M242 or M242A1;* M430C or M430A1C is a component of TRAILER, VAN: fire control, 2-ton, 4-wheel, M244 or M244A1;* M430D or M430A1D is a component of TRAILER, VAN: radar tracking, control, M258 or M258A1;* M430F or M430A1F is a component of TRAILER, VAN: director station, M259 or M259A1;* M430G or M430A1G is a component of TRAILER, LOW-BED: antenna mount, M260 or M260A1;* M430H or M430A1H is a component of TRAILER, FLAT BED: guided missile, M261 or M261A1;* M430K, M430A1K, or M430A1G is a component of TRAILER, VAN: launching control, M262, M262A1 or M262A1C;* and M430N or M430A1N is a component of TRAILER, VAN: electric shop, 2½-ton, 4-wheel, M359 or M359A1.*

Differences among models

Data plate location

Classification

M430 —Standard B (OTCM 36841)
M430A1 —Standard B (OTCM 36841)
M430C —Standard B (OTCM 36841)
M430A1C —Standard B (OTCM 36841)
M430D —Standard B (OTCM 36841)
M430A1D —Standard A (OTCM 36841)
M430F —Standard B (OTCM 36841)
M430A1F —Standard A (OTCM 36841)
M430G —Standard B (OTCM 36841)
M430A1G —Standard A (OTCM 36841)
M430H —Standard B (OTCM 36841)
M430A1H —Standard A (OTCM 36841)
M430K —Standard B (OTCM 36841)
M430A1K —Standard A (OTCM 36841)
M430N —Standard B (OTCM 36841)
M430A1N —Standard A (OTCM 36841)

CHARACTERISTICS*

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2330-202-14

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 rear trailer dolly per box.

Length..........
Width..........
Height..........
Volume..........
Area..........
Gross weight..........
Ship tons..........

Outside Continental United States

Shipped 1 rear trailer dolly per box.

Length..........
Width..........
Height..........
Volume..........
Area..........
Gross weight..........
Ship tons..........

References: TM 9-2330-212-14, TM 9-2330-212-24P

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* For characteristics and data, see items on pages 22-66, 22-73 through 22-80.

DOLLY, TRAILER, FRONT: M431

Major item

Model	*Line item No.*	*Federal stock No.*
M431		2330-626-3389

General

DOLLY, TRAILER, FRONT: M431 is designed to support the front end of TRAILER, FLAT BED: fire control/acquisition radar, 2-ton, 4-wheel, M243*.

Trailer dolly M431 is similar in design to DOLLY, TRAILER, FRONT: M429.* The dolly is equipped with electric brakes.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: TM 9-2330-212-34P

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* For characteristics and data, see items on pages 22-20 and 22-64.

DOLLY, TRAILER, REAR: M432

Major Item

Model	*Line item No.*	*Federal stock No.*
M432	----------------------------------	2330-626-8879

General

DOLLY, TRAILER, REAR: M432 is designed to support the rear end of TRAILER, FLAT BED: fire control/acquisition radar, 2-ton, 4-wheel, M248 *.

Trailer dolly M432 is similar in design to DOLLY, TRAILER, REAR: M430.* The dolly is equipped with electric brakes.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS*

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length ------------------------------------
Width ------------------------------------
Height ------------------------------------
Volume ------------------------------------
Area ------------------------------------
Gross weight ------------------------------------
Ship tons ------------------------------------

Outside Continental United States

Shipped

Length ------------------------------------
Width ------------------------------------
Height ------------------------------------
Volume ------------------------------------
Area ------------------------------------
Gross weight ------------------------------------
Ship tons ------------------------------------

References: TM 9-2330-212-34P.

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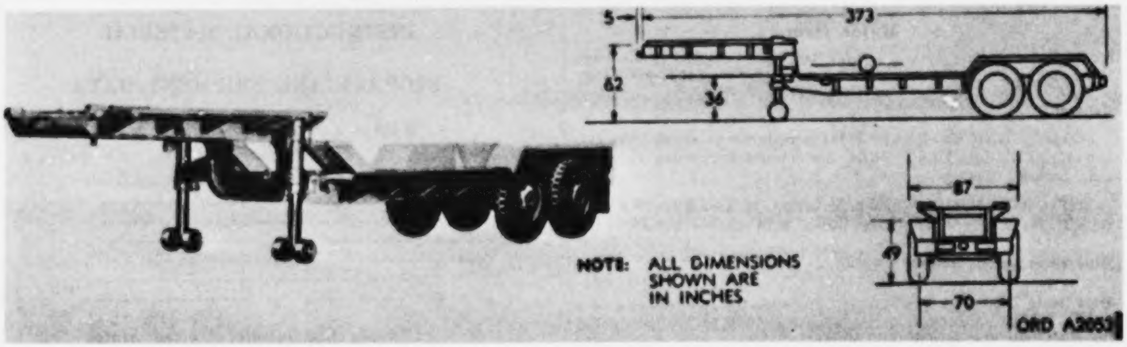
* For characteristics and data, see items on pages 22-21 and 22-46.

SEMITRAILER, LOW BED: 6-TON, 4-WHEEL, XM527, W/E



Model	*Line item No.*	*Federal stock No.*
XM527	4-45277-00	2330-714-3303

General

SEMITRAILER, LOW BED: 6-ton, 4-wheel, XM527 is used for transporting missile sections.

Differences among models

Data plate location

The identification plate is located on the front right side of the gooseneck structure of the semitrailer.

CHARACTERISTICS

Weight:	
Net	
Payload	
Gross	
Empty:	
Fifth wheel	
Rear wheels	
Loaded:	
Fifth wheel	
Rear wheels	
Length, overall	383 in.
Kingpin to front	373 in.
Kingpin to center of axle	
Width, overall	86 in.
Height, overall	62 in.
Loading height, empty	34 in.
Fifth wheel height	51 in.
Ground clearance	20 in.
Angle of departure	33 deg
Tread, center to center	70 in.
Electrical system	24 volt
Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking, type	mechanical
Tires:	
Number	4
Size	11.00 x 20
Ply	12
Pressure:	
Highway	75 psi
Cross-country	35 psi
Sand	15 psi

PERFORMANCE

Towed speed (max):	
Cross-country	20 mph
Highway	55 mph

PRIME MOVER

EQUIPMENT

Basic Issue Items: See TM 9-2330-300-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 semitrailer, uncrated.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

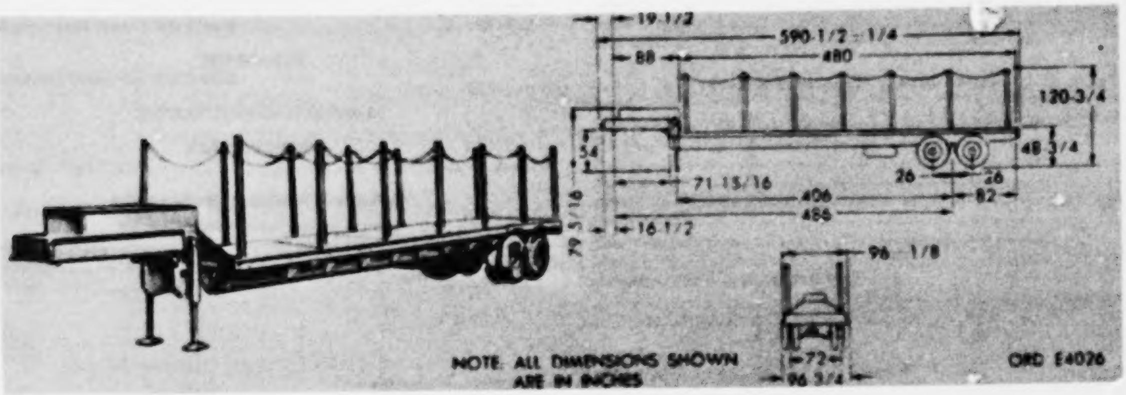
Outside Continental United States

Shipped 1 semitrailer, uncrated.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-300-14, TM 9-2330-300-24P, TM 9-2300-223-20P.

SEMITRAILER, LOW-BED: WRECKER, 12-TON, 4 WHEEL, M270 AND 270A1, W/E



Major Item

Model	*Line item No.*	*Federal stock No.*
M270	4-38955-20	2330-395-1877
M270A1	4-38955-23	2330-289-7515

General

SEMITRAILER, LOW-BED: wrecker, 12-ton, 4-wheel, M270 and M270A1, w/e, is designed to be towed by a vehicle equipped with fifth wheel (lower coupler) and is used for transporting new or salvaged aircraft, and is suitable for general purpose hauling.

Each semitrailer has two axles at the rear mounted on a leaf-spring suspension. A fifth-wheel upper plate under the front end or nose of the semitrailer includes a kingpin which is fitted into the fifth wheel on a towing vehicle to permit the semitrailer to be towed.

A foot-type landing gear supports the front end of the semitrailer when not coupled to a towing vehicle. The spare tire is carried on a winch-type spare wheel and tire carrier assembly under the right side of the chassis frame. Lights on each semitrailer are supplied with current by and operated from the towing vehicle.

Differences among models

The early-type semitrailer M270 is equipped with commercially-designed axles, with air-brakes. The late-type semitrailer M270A1 is equipped with Ordnance-designed axles, with air-over-hydraulic brakes.

Data plate location

Identification plates are located on the right side of the front end or nose of the chassis frame to the rear of the fifth-wheel upper plate.

Classification:

M270—Standard B (OTCM 36876).
M270A1—Standard A (OTCM 36876).

CHARACTERISTICS

M270

Weight	17,500 lb
Payload:	
On inferior roads	24,000 lb
On highway	40,000 lb
Gross:	
On inferior roads	41,500 lb
On highway	57,500 lb
Kingpin load (w/payload distributed uniformly):	
On inferior roads	12,900 lb
On highway	21,500 lb
Ground clearance	18 in.
Loading height	49 in.
Height of fifth wheel plate above ground	54 in.
Overall dimensions:	
Length	590½ in.
Width	96¾ in.
Height, landing gear retracted, reducible to	60 in.
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	air
Parking, type	none
Tires:	
Size	11:00 x 12
Ply	12
Pressure:	
Highway	
Cross country	
Sand	
Tread	72 in.

M270A1:

Weight	17,500 lb
Payload:	
On inferior roads	24,000 lb
On highway	40,000 lb
Gross:	
On inferior roads	41,500 lb
On highway	57,500 lb
Kingpin load (w/payload distributed uniformly):	
On inferior roads	12,900 lb
On highway	21,500 lb
Ground clearance	18 in.
Loading height	49 in.
Height of fifth wheel plate above ground	54 in.
Overall dimensions:	
Length	596½ in.
Width	96¾ in.
Height, landing gear retracted, reducible to	60 in.
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	air-over-hydraulic
Parking, type	none
Tires:	
Size	11:00 x 12
Ply	12
Pressure:	
Highway	
Cross country	
Sand	
Tread	72 in.

PERFORMANCE

Towing speed (max):

Prepared roads (20-ton load)	50 mph
Unimproved roads (12-ton load)	30 mph

EQUIPMENT

Basic Issue Items: See TM 9-8240

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR:	M246, M52, or equal

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	591 in.
Width	97 in.
Height	80 in.
Volume	
Area	
Gross weight	
Ship tons	

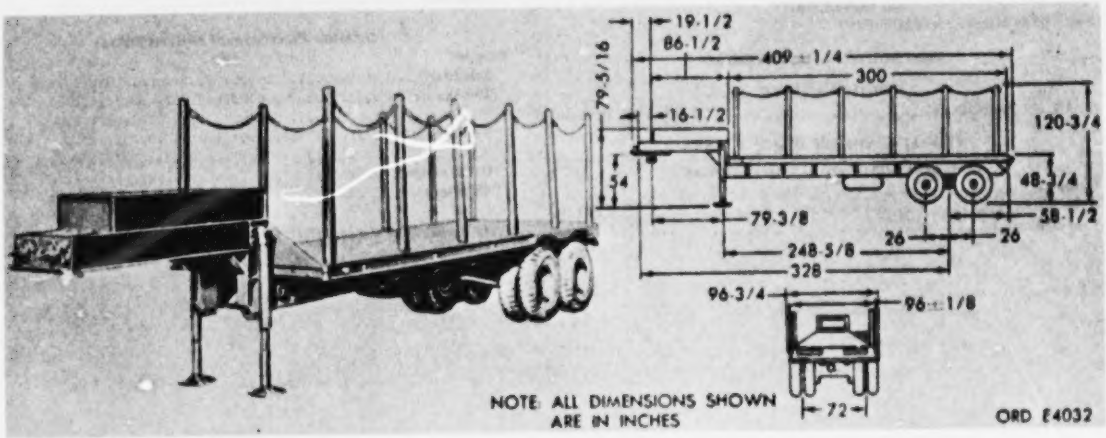
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8240, SNL G-802

SEMITRAILER, LOW-BED: WRECKER, 12-TON, 4-WHEEL, M269 AND M269A1



Major item

Model	*Line item No.*	*Federal stock No.*
M269, w/e	4-38954-10	2330-395-1876
M269A1, w/e	4-38954-01	2330-542-2980

General

SEMITRAILER, LOW-BED: wrecker, 12-ton, 4-wheel, M269 and M269A1, is designed to be towed by a TRUCK TRACTOR: 5-ton, 6 x 6, M52* or similar vehicle equipped with a fifth wheel.

The vehicles are intended primarily for use by the Air Force for transporting new or salvaged aircraft, and for general purpose hauling.

Each semitrailer has: two axles at the rear mounted on a leaf-spring suspension, a fifth wheel upper plate under the front end, a foot-type landing gear which supports the front end when not coupled to a towing vehicle, two chock blocks located in brackets welded to the chassis frame beams near the rear end, a spare tire carried on a winch-type spare wheel and tire carrier assembly located under the right side of the chassis frame, a stowage compartment and tool box mounted on top of the front end of the chassis frame above the fifth wheel upper plate, an air operated brake mechanism controlled from the towing vehicle, stake pockets welded to the inside of the body frame outer rails for hardwood stakes, and a 24-volt receptacle, 12-volt socket, and 6-volt socket located at the front end.

Power source and operation for lighting of semitrailers is supplied by the towing vehicle.

Differences among models

Data plate location

The data plate is located on the right side of the front of the chassis frame to the rear of the fifth wheel upper plate.

Classification

M269 – Standard B (OTCM 36876)
M269A1 – Standard A (OTCM 36876)

CHARACTERISTICS

Weight:	
Net	14,200 lb
Payload:	
On inferior roads	24,000 lb
On highway	40,000 lb
Gross:	
On inferior roads	38,200 lb
On highway	54,200 lb
Weight distribution:	
Empty:	
Fifth wheel	3,680 lb
Axle	10,520 lb
Loaded:	
On inferior roads:	
Fifth wheel	10,160 lb
Axle	28,040 lb
On highway:	
Fifth wheel	18,200 lb
Axle	36,000 lb
Tires:	
Tread	72 in.
Ply	12
Size	11.00 x 20
Pressure	70 psi
Ground clearance	18 in.
Loading height	48¾ in.
Height of fifth wheel, landing gear down	54 in.
Overall dimensions:	
Length	409 in.
Width	96¾ in.
Height, landing gear retracted	reducible to 60 in.
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	air
Parking brake	none
Towing vehicle to be used	TRUCK TRACTOR: M246, M52, or equal
Recommended towing speed:	
On highway	50 mph
Off highway	15 mph
On highway — loads to 18 tons	50 mph
Off highway — loads to 12 tons	30 mph

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-802.

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped uncrated:

Length	
Width	
Height	
Volume	1,816 cu ft
Area	275 sq ft
Gross weight	
Ship tons	

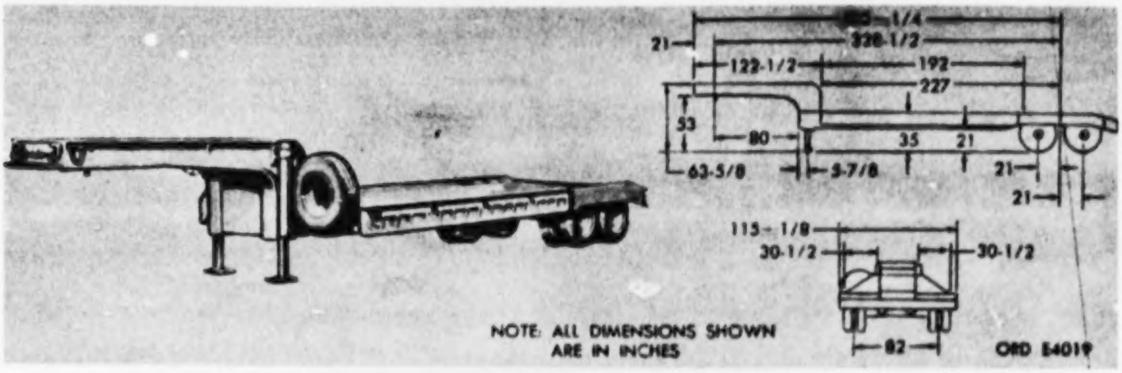
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-802, TM 9-8340

SEMITRAILER, LOW-BED: 15-TON, 4-WHEEL, M172, W/E SEMITRAILER, LOW-BED: 25-TON, 4-WHEEL, M172A1, W/E



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Shown: M172

Model	*Line item No.*	*Federal stock No.*
172	4-38941-00	2330-735-9326
172A1	4-38943-00	2330-317-6448

General

SEMITRAILER, LOW-BED: 15-ton, 4-wheel, M172, w/e, and 25-ton, 4-wheel M172A1, w/e, is a 4-wheel, dual axle, dual-tired vehicle which is used to transport general cargo. The two tubular axles, mounted at the rear, are of walking beam-typed suspension.

A fifth-wheel upper plate under the front end of the gooseneck structure bears a reversible kingpin that is accessible through a hinged cover on top of the gooseneck. The double-end kingpin, proper size down, is fitted into the fifth wheel of the towing vehicle to permit the semitrailer to be towed.

Two mechanically actuated retractable, shoe-typed, landing gear legs, one located on the left side and one on the right side, are provided to support the front end of the semitrailer when the semitrailer is not coupled to the towing vehicle. The landing gear has a tow-speed gearbox with a low and a high gear. The two retractable support legs are operated by a ratchet-type handcrank, located on right side of gooseneck structure. The frame structure is the load bed of the semitrailer. The frame is of rigidly welded structural steel construction.

Differences among models

The early type semitrailer M172 is equipped with commercially designed axles and air brakes. The late type semitrailer M172A1 is equipped with an Ordnance standard axle, air-over-hydraulic brakes, and a modified gooseneck kingpin arrangement.

Data plate location

The identification plate (nameplate) is mounted on the right side of the gooseneck.

Classification

M172 —Standard B (OTCM 37119)
M172A1—Standard A (OTCM 37119)

CHARACTERISTICS

SEMITRAILER M172:	
Weight:	
Net	15,500 lb
Payload	30,000 lb
Gross	45,500 lb
Empty:	
Fifth wheel	4,650 lb
Rear wheels	10,850 lb
Loaded:	
Fifth wheel	14,650 lb
Rear wheels	30,850 lb
Ground clearance	13 in.
Loading height, empty	35 in.
Length, overall	406 in.
Width, overall	115 in.
Height, overall	63⅝ in.
Electrical system	24 volts
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	air
Parking, type	mechanical
Tires:	
Size	10.00 x 15
Ply	14
Pressure:	
Highway	
Cross country	
Sand	
Tread	82 in.
SEMITRAILER M172A1:	
Weight:	
Net	14,860 lb
Payload	50,000 lb
Gross	64,860 lb
Empty:	
Fifth wheel	4,500 lb
Rear wheels	10,360 lb
Loaded:	
Fifth wheel	24,500 lb
Rear wheels	40,460 lb
Ground clearance	14⅛ in.
Loading height, empty	39⅝ in.
Length, overall	414 in.
Width, overall	115 in.
Height, overall	68 in.
Electrical system	24 volts
Brakes:	
Manufacturer	Bendix-Westinghouse
Type	air-over-hydraulic
Parking, type	none
Tires:	
Size	11.00 x 15
Ply	20
Pressure:	
Highway	
Cross country	
Sand	
Tread	82 1/16 in.

PERFORMANCE

Towing speed (max):
Cross country .... 10 mph
Highway .... 30 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-211-14.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: M52

STORAGE AND SHIPMENT DATA

M172:

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume .... 1,719 cu ft
Area .... 832 sq ft
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

M172A1:

Within Continental United States

Shipped
Length ....
Width ....
Height ....
Volume .... 1,882 cu ft
Area .... 848 sq ft
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

References: TM 9-2330-211-14, TM 9-2330-211-24P.

SEMITRAILER, LOW BED: 60-TON, 8-WHEEL, M162A1, W/E

(Illustration will be added at a later date)

Model	*Line item No.*	*Federal stock No.*
M162A1	4–38947–02	2330–542–5645

General

SEMITRAILER, LOW BED: 60-ton, 8-wheel, M162A1 is used to transport heavy construction equipment such as cranes, rollers, scrapers, and tractors in the 30–60 ton class, and serves as an emergency transporter for 50–60 ton combat vehicles pending development of a special transporter.

Differences among models

Data plate location

Classification: Standard B (OTCM 37119).

CHARACTERISTICS

Weight:
  Net ....
  Payload ....
  Gross ....
  Empty:
    Fifth wheel ....
    Rear wheels ....
  Loaded:
    Fifth wheel ....
    Rear wheels ....
  Length, overall ....
  Kingpin to front ....
  Kingpin to center of axle ....
  Width, overall ....
  Height, overall ....
  Loading height, empty ....
  Fifth wheel height ....
  Ground clearance ....
  Angle of departure ....
  Tread:
    Center to center ....
    Outside to outside ....
  Electrical system ....
  Brakes:
    Manufacturer ....
    Type ....
    Parking, type ....
  Tires:
    Number ....
    Size ....
    Ply ....

Pressure:
  Highway ....
  Cross-country ....
  Sand ....

PERFORMANCE

Towed speed (max):
  Cross-country ....
  Highway ....

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 semitrailer, uncrated:
  Length ....
  Width ....
  Height ....
  Volume ....
  Area ....
  Gross weight ....
  Ship tons ....

Outside Continental United States

Shipped 1 semitrailer, uncrated:
  Length ....
  Width ....
  Height ....
  Volume ....
  Area ....
  Gross weight ....
  Ship tons ....

References:

SEMITRAILER, MAINTENANCE: WEAPON, MECHANICAL UNIT, M457, W/E

Major Item

Model	*Line item No.*	*Federal stock No.*
M457	4-38956-00	2330-624-3363

General

SEMITRAILER, MAINTENANCE: weapon, mechanical unit, M457 is a modified SEMITRAILER, VAN: shop, 6-ton, 2-wheel, M508[*] with mechanical equipment installed for performing the maintenance and servicing of Ordnance special weapons units. Semitrailer M457 and SEMITRAILER, MAINTENANCE: weapon, electrical unit, M458[*] are connected together by SEMITRAILER, MAINTENANCE: weapon, connecting unit, M459[*], to form a unit for shop operation.

Differences among models

Data plate location

Classification: Standard A (OTCM 36805).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped uncrated

Length ....

Width ....

Height ....

Volume ....

Area ....

Gross weight ....

Ship tons ....

Outside Continental United States

Shipped uncrated

Length ....

Width ....

Height ....

Volume ....

Area ....

Gross weight ....

Ship tons ....

References: TM 9-2330-210-14.

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[*] For characteristics and data, see items on pages 22-31, 22-32, and 22-30.

SEMITRAILER, MAINTENANCE: WEAPON, ELECTRICAL UNIT, M458, W/E

Major item

Model	***Line item No.***	***Federal stock No.***
M458	4-38957-00	2330-624-3364

General

SEMITRAILER, MAINTENANCE: weapon, electrical unit, M458, is a modified SEMITRAILER VAN: shop, 6-ton, 2-wheel, M508* with electrical equipment installed for performing maintenance and servicing of Ordnance special weapons units. Semitrailer M458 and SEMITRAILER, MAINTENANCE: mechanical unit, M457* are connected together by SEMITRAILER, MAINTENANCE: weapon, connecting unit, M459* to form a unit for shop operation.

Differences among models

Data plate location

Classification: Standard A (OTCM 36805)

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Domestic Pack

Shipped uncrated
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Oversea Pack

Shipped uncrated
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: TM 9-2330-210-14

* For characteristics and adta, see items on pages 22-31, 22-32, and 22-50

SEMITRAILER, MAINTENANCE: WEAPON, CONNECTING UNIT, M459, W/E

Major item

Model	*Line item No.*	*Federal stock No.*
M459	4-88958-00	2330-634-3305

General

SEMITRAILER, MAINTENANCE: weapon, connecting unit, M459, is a modified SEMITRAILER, VAN: shop, 6-ton, 2-wheel, M508C* with specific equipment installed for performing maintenance and servicing of Ordnance special weapons units. Semitrailer M459 connects SEMI-TRAILER, MAINTENANCE: weapon electrical unit, M458* and SEMI-TRAILER, MAINTENANCE: weapon mechanical unit, M457* to form a unit for shop operation.

Differences among models

Data plate location

Classification: Standard A (OTCM 36805)

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped uncrated
Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

Outside Continental United States

Shipped uncrated
Length..
Width..
Height..
Volume..
Area..
Gross weight..
Ship tons..

References: TM 9-2330-210-14

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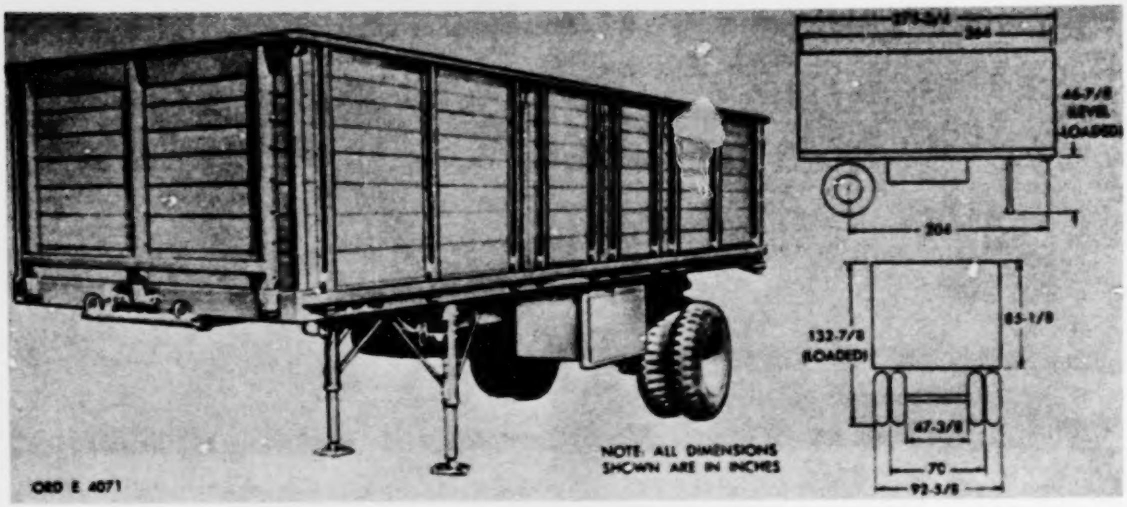
* For characteristics and data, see items on pages 22-31, 22-32, and 22-50.

SEMITRAILER, STAKE: 6-TON, 2-WHEEL, M118 AND M118A1, W/E



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Major item

Model	*Line item No.*	*Federal stock No.*
M118	4-38965-10	2330-835-8123
M118A1	4-38965-16	2330-572-6221

General

SEMITRAILER, STAKE: 6-ton, 2-wheel, M118 and M118A1, w/e, is cargo carrier intended for use on the highway or cross-country. The semitrailers M118 and M118A1 consist of a stake rack body mounted on a CHASSIS, SEMITRAILER: 6-ton, 2-wheel, M117 and M117A1.* The racks are of various sizes. They are each made of eight 1-inch boards bolted to vertical stakes, which fit into stake pockets on the sides, front and rear of the body. The chassis semitrailers M117 and M117A1 have an undercarriage at the rear and landing gear assemblies near the forward end. The rack body of semitrailers M118 and M118A1 are equipped with a sheet metal box for stowage of the tarpaulin when not in use.

Differences among models

The early semitrailer M118 is equipped with commercially designed axle and air brakes.

The suspension assembly (dolly) of semitrailer M118A1 is readily removable for air transport. The semitrailer M118 has air-operated brakes and the semitrailer M118A1 has air-over-hydraulic brakes.

Data plate location

The identification plate (nameplate) is fastened to the crossmember of the chassis frame at the forward end above the pickup plate.

Classification

M118 —Standard B (OTCM 36876)
M118A1—Standard A (OTCM 37119)

CHARACTERISTICS

Type	semitrailer rack body
Weight:	
Net	7,140 lb
Payload:	
Cross-country	12,000 lb
Highway	16,200 lb
Gross:	
Cross-country	19,140 lb
Highway	23,340 lb
Length (overall)	275¾ in.
Width (overall)	94⅝ in.
Height (overall)	103 9/16 in.
Ground clearance	19¼ in.
Tread:	
Center-to-center	70 in.
Outside-to-outside	92⅜ in.
Landing gear:	
Manufacturer	Homan and Co
Type	2-speed retractable
Tires:	
Size	9.00 x 20
Ply	8
Tread design	
Pressure (cool)	40 psi
Highway	
Cross-country	
Sand	
Brakes:	
Type:	
M118	air
M118A1	air-over-hydraulic
Manufacturer	Timken-Detroit
Parking, type	hand lever operated
M118	wheel chocks
M118A1	
Electrical system:	
Potential	24 volts
Tail lights:	
Manufacturer	Standard Ordnance
Left	service tail and stop and blackout
Right	blackout tail and stop
Clearance lights	8

PERFORMANCE

Towing speed (max):	
Cross country	30 mph
Highway	50 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-210-14

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK TRACTOR: 2½-ton, 6 x 6, M48

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* Characteristics and data will be added at a later date.

STORAGE AND SHIPMENT DATA

Within Continental United States

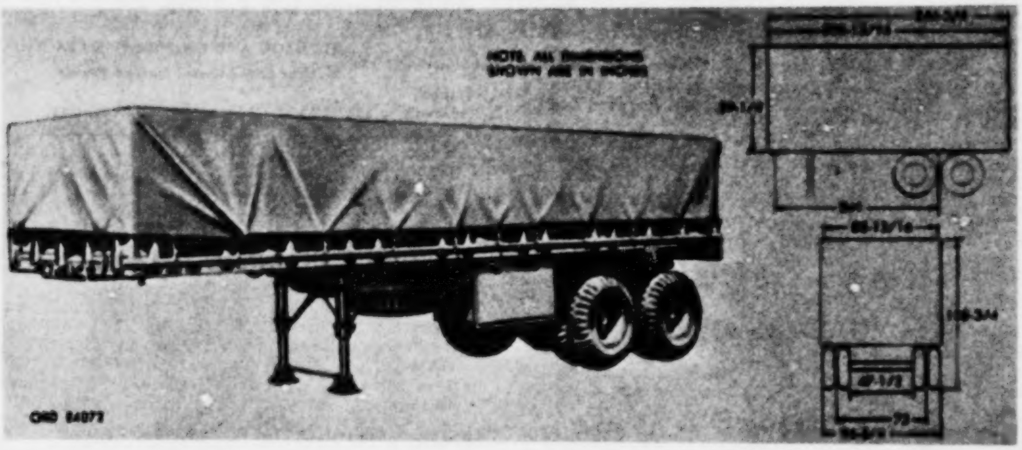
Shipped	
Length	
Width	
Height	
Volume	1,559 cu ft
Gross weight	
Ship tons	38,975

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–2330–210–14

SEMITRAILER, STAKE: 12-TON, 4-WHEEL, M127, M127A1, AND M127A1C, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M127	4-88971-10	2330-797-9207
M127A1	4-38971-20	2330-048-7743
M127A1C	4-88971-30	2330-752-9750

General

SEMITRAILER, STAKE: 12-ton, 4-wheel, M127, M127A1, and M127A1C, w/e is used to transport general cargo, and consists essentially of a body frame of welded construction mounted on the CHASSIS, SEMI-TRAILER: 12-ton, 4-wheel, M126, M126A1 and M126A1C.

The body frame, consisting of pressed steel side rails, crossmembers, and short crossmembers, is welded together with the chassis frame forming one integral unit.

The semitrailer chassis M126, M126A1, and M126A1C consists of two drop-frame I-section longitudinal frame rails and intermediate crossmembers along with an upper fifth wheel plate, kingpin, two axles at the rear mounted on a leaf-spring suspension, taillights, brakes, and foot-type landing legs.

Differences among models

Stake semitrailers M127 and M127A1 have similar body frame construction, except that semitrailer M127A1 is equipped with chains which support the panels and also lifting rings for hoisting the semitrailer. Semitrailers M127A1 and M127A1C are similar except the M127A1C is equipped with a voltage control box mounted on the underside of the body.

Data plate location

The identification plate (nameplate) is located on the right side of the front end of the chassis longitudinal frame rail.

Classification

M127 —Standard B (OTCM 36876)
M127A1 —Standard A (OTCM 37119)
M127A1C—Standard A

CHARACTERISTICS

Type	semitrailer rack body
Weight:	
Net:	
M127	13,500 lb
M127A1	14,400 lb
M127A1C	14,400 lb
Payload:	
Hard surface roads	36,000 lb
Cross country	24,000 lb
Gross:	
M127:	
Hard surface roads	49,500 lb
Cross country	37,500 lb
M127A1 and M127A1C:	
Hard surface roads	50,400 lb
Cross-country	38,400 lb
Length (overall)	344¾ in.
Width (overall)	96⅝ in.
Height (overall)	108¾ in.
Ground clearance	11⅛ in.
Tread (center-to-center)	72 in.
Landing gear:	
Manufacturer	Fruehauf Trailer Co.
Type	handcrank, 2-speed
Length to top of floor:	
Retracted	48 in.
Extended	60 in.
Width at feet (overall)	80⅝ in.
Tires:	
Quantity	8
Size	11.00 x 20
Ply	12
Type	NDCC military
Pressure:	
Highway	50 psi
Cross country	50 psi
Sand	15 psi
Brakes:	
Type:	
M127	air
M127A1, M127A1C	air-over-hydraulic
Manufacturer:	
M127	Timken-Detroit
M127A1, M127A1C	Standard Forge & Axle Co.
Brakes:	
Parking, type	wheel chocks
Electrical system:	
Potential	24 v dc
Lamps:	
Right:	
Blackout taillight	3 cp
Blackout stoplight	3 cp
Left:	
Blackout taillight	3 cp
Service taillight	3 cp
Service stoplight	32 cp
Clearance lights	3 cp

CHARACTERISTICS—Continued

Electrical system—Continued

Axles:

Type	tubular
Quantity	2
Manufacturer:	
M127	Timken Detroit Axle Co.
M127A1	Standard Forge and Axle Co.
M127A1C	Standard Forge and Axle Co.

Wheels:

Type	dual, military disk
Manufacturer	Budd Co.
Rim size	20 x 7.5
Tire retention and removal	split lock ring
Wheel bearing, type	tapered roller

Spare tire carrier:

Type	one man, cable lift
Manufacturer	Nash
Operation	wheel nut wrench

PERFORMANCE

Towing speed (max):

Highway	50 mph
Cross-country	30 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-207-14

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR, 5-ton, 6 x 6, M52*

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	
Width	
Height	
Volume	2,100 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

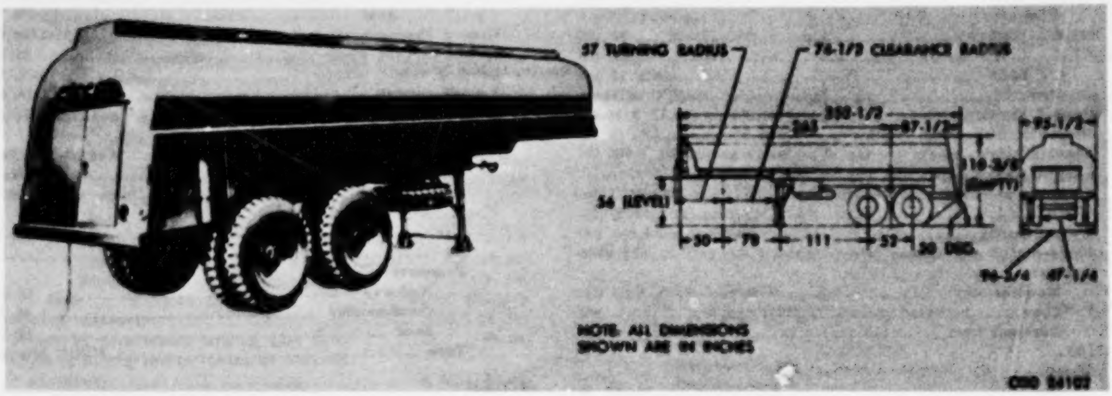
Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-2330-207-14, TM 9-2330-207-24P

* For characteristics and data, see item in section 21.

SEMITRAILER, TANK: GASOLINE, 12-TON, 4-WHEEL, M131, M131A1, AND M131A2; SEMITRAILER, TANK: FUEL, 5,000-GALLON, 4-WHEEL, M131A4, AND M131A5; SEMITRAILER, TANK: FUEL SERVICING, 5,000-GALLON, 4-WHEEL, M131A3C, AND M131A4C



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Shown. Semitrailer, Tank: M131

Model	*Line item No.*	*Federal stock No.*
M131, w/e	4-38981-20	2330-835-8565
M131A1, w/e	4-38981-25	2330-508-1484
M131A2, w/e	4-38981-28	2330-574-7964
M131A3C	4-38982-10	2330-533-3380
M131A4	4-38981-08	2330-994-9459
M131A4C	4-38982-08	2330-994-9458
M131A5	4-38981-29	2330-226-6079

General

SEMITRAILER, TANK: GASOLINE, 12-TON, 4-WHEEL, M131, M131A1, AND M131A2; SEMITRAILER, TANK: FUEL, 5,000-GALLON, 4-WHEEL, M131A4 AND M131A5; SEMITRAILER, TANK: FUEL SERVICING, 5,000-GALLON, 4-WHEEL, M131A3C, and M131A4C, is designed to transport and dispense various types of fuel.

Each vehicle carries an integral gasoline tank of 5,000-gallon capacity, a cabinet which houses an air-cooled auxiliary engine, pump, valves, controls, a hose tube, and a fire extinguisher niche on each side (M131 and M131A1). Cabinet and hose tubes are equipped with doors.

All models have two axles at the rear as part of the suspension. A kingpin plate under the front end or nose of the semitrailer bears a kingpin which fits into a fifth wheel on the towing vehicle. The spare wheel and tire are carried on a winch-type carrier.

Each vehicle is equipped with a ladder, one amber reflector on each side of the front corners, and one red reflector on each side of the rear corners. Each compartment has a manhole cover at the top.

Differences among models:

M131 and M131A1 tanks are divided into three compartments. M131A2 tank is divided into four compartments.

M131, M131A1, M131A2, and M131A3C tanks have a coating deficiency of resistance to corrosion. Also, tanks are for handling gasoline only. M131A4 and M131A4C incorporate corrosion-resistant steel tanks, aluminum pipes, and components. These tanks are capable of handling gasoline, kerosene, No. 1 diesel fuel, JP-4, and JP-5 fuels.

M131A4 is a 5,000-gallon semitrailer transporter intended for use as a bulk hauler of various fuels. The vehicle is completely equipped with unloading equipment, including an auxiliary engine driven pump.

The M131A4C is similar to the M131A4 but has, in addition, an integral fuel servicing capability for kerosene, gasoline, No. 1 diesel, JP-4 and JP-5 fuels. A complete filtration unit is incorporated, including hose reel and meter, for a high volume (225 gpm) delivery. A 5-50 gpm controlled delivery hose is added for servicing ground vehicles in an emergency.

Data plate location:

The semitrailer identification plate (nameplate) is located on the lower-right side of the nose of the vehicle.

Classification:

M131—Limited Standard (AMCTC item 1419)
M131A1—Limited Standard (AMCTC item 1419)
M131A2—Standard C (AMCTC item 1419)
M131A3—Obsolete
M131A4—Standard A (AMCTC item 1419)
M131A4C—Standard A (AMCTC item 1419)
M131A5—Standard A (AMCTC item 3170)

CHARACTERISTICS

M131:

Weight:	
Net	14,850 lb
Payload:	
Hard surface roads	30,540 lb
Cross-country	19,620 lb
Gross:	
Hard surface roads	45,390 lb
Cross-country	34,470 lb
Empty:	
Fifth wheel	3,320 lb
Axle	11,530 lb

CHARACTERISTICS—Continued

M131—Continued	
Loaded:	
On inferior roads:	
Fifth wheel	12,730 lb
Axle	21,740 lb
On highway:	
Fifth wheel	17,480 lb
Axle	27,910 lb
Tire:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	50 psi
Cross-country	50 psi
Sand	15 psi
Type	NDCC Military
Ground clearance	11 3/16 in.
Height of fifth wheel, landing gear down	56 in.
Loading height, empty (to top of walkway guardrail)	109 in.
Length (tank length 29 ft, 4½ in. plus 8½ in. overall dummy coupling)	30 ft, 1 in.
Width	96¾ in.
Tank capacity	5,000 gal
Pump-centrifugal, engine driven, capacity	225 gpm
Brakes:	
Manufacturer	Timken-Detroit Axle Co.
Type	air
Parking, type	wheel chock blocks
M131A1:	
Weight:	
Net	14,280 lb
Payload:	
Hard surface roads	30,500 lb
Cross-country	19,645 lb
Gross:	
Hard surface roads	44,780 lb
Cross-country	33,925 lb
Empty:	
Fifth wheel	2,940 lb
Axle	11,340 lb
Loaded:	
On inferior roads:	
Fifth wheel	12,355 lb
Axle	21,570 lb
On highway:	
Fifth wheel	17,265 lb
Axle	27,515 lb
Ground clearance	11 3/16 in.
Height of fifth wheel, landing gear down	56 in.
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	50 psi
Cross-country	50 psi
Sand	15 psi
Type	NDCC Military
Height, empty (to top of walkway guardrail)	109 in.
Length, overall	351½ in.
Tank capacity	5,000 gal
Each of four compartments	1,250 gal
Pump-centrifugal, engine driven, capacity	225 gpm
Fording depth	56 in.
Brakes:	
Manufacturer	Wagner-Lockheed
Type	air-hydraulic
Parking, type	wheel chock blocks
M131A2:	
Weight:	
Net	12,400 lb
Payload:	
Hard surface roads	30,500 lb
Cross-country	20,344 lb
Gross:	
Hard surface roads	42,900 lb
Cross-country	32,744 lb
Empty:	
Fifth wheel	3,500 lb
Axle	8,900 lb
Loaded:	
On inferior roads:	
Fifth wheel	11,724 lb
Axle	21,020 lb
On highway:	
Fifth wheel	16,700 lb
Axle	26,200 lb
Ground clearance (from bottom of radius rods)	11-3/16 in.
Height of fifth wheel	56 in.
Loading height, empty	107⅝ in.
Length, overall	374-3/16 in.
Fording depth, pump	24 in.
Brakes:	
Manufacturer	Wagner-Lockheed
Type	air-hydraulic
Parking, type	wheel chock blocks
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	45 psi
Cross-country	45 psi
Sand	15 psi
Type	NDCC Military
M131A3C:	
Weight:	
Net	14,560 lb
Payload:	
Hard surface roads	30,500 lb
Cross-country	20,344 lb
Gross:	
Hard surface roads	45,060 lb
Cross-country	34,904 lb
Empty:	
Kingpin	4,170 lb
Wheels	10,390 lb
Loaded:	
On inferior roads:	
Fifth wheel	12,700 lb
Axle	21,900 lb
On highway:	
Fifth wheel	17,500 lb
Axle	28,000 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	50 psi
Cross-country	50 psi
Sand	15 psi
Type	NDCC Military
Ground clearance	11-3/16 in.
Height of fifth wheel	56 in.
Loading height, empty (to top of walkway guardrail)	8 ft, 11⅝ in.
Length	374-3/16 in.
Tank capacity	5,000 gal
Each of four compartments	1,250 gal
Pump-centrifugal, engine driven, capacity	300 gpm
Brakes:	
Manufacturer	Wagner-Lockheed
Type	air-over-hydraulic
Parking, type	wheel chock blocks
M131A4:	
Weight:	
Net	12,900 lb

CHARACTERISTICS—Continued

M131A4—Continued

- Payload:
  - Hard surface roads .... 35,250 lb
  - Cross-country .... 23,255 lb
- Gross:
  - Hard surface roads .... 48,150 lb
  - Cross-country .... 36,155 lb
- Empty:
  - Kingpin .... 5,000 lb
  - Axle .... 13,800 lb
- Loaded:
  - On inferior roads:
    - Fifth wheel .... 13,700 lb
    - Axle .... 24,700 lb
  - On highway:
    - Fifth wheel .... 17,000 lb
    - Axle .... 26,600 lb
- Tires:
  - Size .... 11.00 x 20
  - Ply 12
  - Pressure:
    - Highway .... 50 psi
    - Cross-country .... 50 psi
    - Sand .... 15 psi
  - Type .... NDCC Military
- Ground clearance .... 11-3/16 in.
- Height of fifth wheel, landing gear down .... 56 in.
- Loading height, empty (to top of walkway guardrail) .... 8 ft, 11⅝ in.
- Length (tank length 29 ft, 4½ in. plus 8½ in. overall dummy coupling) .... 352½ in.
- Tank capacity .... 5,000 gal
- Pump-centrifugal, portable, engine driven, capacity .... 300 gpm
- Brakes:
  - Manufacturer .... Timken-Detroit Axle Co.
  - Type .... air-over-hydraulic
  - Parking, type .... wheel chock blocks

M131A4C:

- Weight:
  - Net .... 13,850 lb
  - Payload:
    - Hard surface roads .... 30,520 lb
    - Cross-country .... 19,645 lb
  - Gross:
    - Hard surface roads .... 37,200 lb
    - Cross-country .... 24,050 lb
  - Empty:
    - Fifth wheel .... 3,020 lb
    - Axle .... 10,800 lb
  - Loaded:
    - On inferior roads:
      - Fifth wheel .... 12,200 lb
      - Axle .... 21,100 lb
    - On highway:
      - Fifth wheel .... 17,000 lb
      - Axle .... 27,400 lb
- Tires:
  - Size .... 11.00 x 20
  - Ply 12
  - Pressure:
    - Highway .... 50 psi
    - Cross-country .... 35 psi
    - Sand .... 15 psi
  - Type .... NDCC Military
- Ground clearance .... 11-3/16 in.
- Height of fifth wheel, landing gear down .... 56 in.
- Loading height, empty (to top of walkway guardrail) .... 8 ft, 11⅝ in.
- Length (tank length 29 ft, 4½ in. plus 8½ in. overall dummy coupling) .... 373-5/16 in.
- Tank capacity .... 5,000 gal
  - Each of four compartments .... 1,250 gal
- Pump-centrifugal, portable, engine driven, capacity .... 300 gpm
- Brakes:
  - Manufacturer .... Wagner-Lockheed
  - Type .... air-over-hydraulic
  - Parking, type .... wheel chock blocks

M131A5:

- Weight:
  - Net .... 12,900 lb
  - Payload:
    - Hard surface roads .... 35,250 lb
    - Cross-country .... 23,270 lb
  - Gross:
    - Hard surface roads .... 48,200 lb
    - Cross-country .... 36,200 lb
  - Empty:
    - Kingpin .... 3,520 lb
    - Axle .... 8,940 lb
  - Loaded:
    - On inferior roads:
      - Fifth wheel .... 11,750 lb
      - Axle .... 21,120 lb
- Tires:
  - Size .... 11.00 x 20
  - Ply 12
  - Pressure:
    - Highway .... 50 psi
    - Cross-country .... 35 psi
    - Sand .... 15 psi
  - Type .... NDCC Military
- Ground clearance (from bottom of radius rods) .... 11-3/16 in.
- Height of fifth wheel, landing gear down .... 56 in.
- Loading height, empty (to top of walkway guardrail) .... 8 ft, 11⅝ in.
- Length, overall (includes truck, tractor: M52) .... 45 ft
- Width (max) .... 96⅝ in.
- Height (max) .... 107⅝ in.
- Angle of departure .... 72 deg
- Length, overall .... 373-5/16 in.
- Tank capacity .... 5,000 gal
- Fording depth pump .... (approx) 27 in.
- Chassis:
  - Type .... Drop forge integral with tank shell: tandem axle: fifth wheel plate kingpin: landing gear.
- Tank:
  - Type .... 5,000-gallon capacity, excluding 3 percent outage: corrosion-resistant steel material.
- Brakes:
  - Manufacturer .... Timken-Detroit Axle Co.
  - Type .... air-over-hydraulic
  - Parking, type .... wheel chock blocks

PERFORMANCE

M131 and M131A1:

- Sustained speed:
  - Cross-country .... 20 mph
  - Highway (governed) .... 52 mph
- Fording depth .... 56 in.
- Pump-centrifugal, portable, engine driven, capacity .... 225 gpm

M131A2:

- Sustained speed:
  - Cross-country .... 20 mph
  - Highway .... 52 mph
- Pump fording depth .... 24 in.
- Pump .... 300 gpm

PERFORMANCE—Continued

M131A3C:

Sustained speed:	
Cross-country	20 mph
Highway	52 mph
Pump fording depth	24 in.
Pump	300 gpm

M131A4 and M131A4C:

Sustained speed:	
Cross-country	20 mph
Highway	52 mph
Pump fording depth	27 in.
Pump	300 gpm

M131A5:

Sustained speed:	
Cross-country	20 mph
Highway	55 mph
Fording depth	not required
Pump-centrifugal, engine driven	300 gpm @ 75 psi

EQUIPMENT

Basic Issue Items: See TM 9-2330-208-15.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 5-ton, 6 x 6 ....M52*

STORAGE AND SHIPMENT DATA

Shipped—tank semitrailer uncrated.

Within and Outside Continental United States

M131:

Length	352½ in.
Width	96⅝ in.
Height	110⅝ in.
Volume	2196.4 cu ft
Area	236 sq ft
Gross weight	14,850 lb
Ship tons	54.91

M131A1:

Length	351½ in.
Width	96⅝ in.
Height	113⅝ in.
Volume	2255.8 cu ft
Area	222 sq ft
Gross weight	14,280 lb
Ship tons	56.4

M131A2:

Length	374-3/16 in.
Width	96⅝ in.
Height	107⅝ in.
Volume	2295.5 cu ft
Area	272 sq ft
Gross weight	12,400 lb
Ship tons	57.39

M131A3C:

Length	374½ in.
Width	96⅝ in.
Height	107⅝ in.
Volume	2284.9 cu ft
Area	277 sq ft
Gross weight	14,720 lb
Ship tons	57.13

M131A4:

Length	373-5/16 in.
Width	96⅝ in
Height	107⅝ in.
Volume	2240.4 cu ft
Area	273 sq ft
Gross weight	12,900 lb
Ship tons	56.0

M131A4C:

Length	373-5/16 in.
Width	96⅝ in.
Height	107⅝ in.
Volume	2240.4 cu ft
Area	273 sq ft
Gross weight	13,850 lb
Ship tons	56.0

M131A5:

Length	373-5/16 in.
Width	96⅝ in.
Height	107⅝ in.
Volume	2240.4 cu ft
Area	273 sq ft
Gross weight	12,785 lb
Ship tons	56.0

References: LO 9-2330-208-12, SM ORD 9 SNL G-755, SM 9-4-5180-V13, SM 9-4-5180-V17, TB 55-12, TM 9-2330-208-15, TM 9-2330-208-24P.

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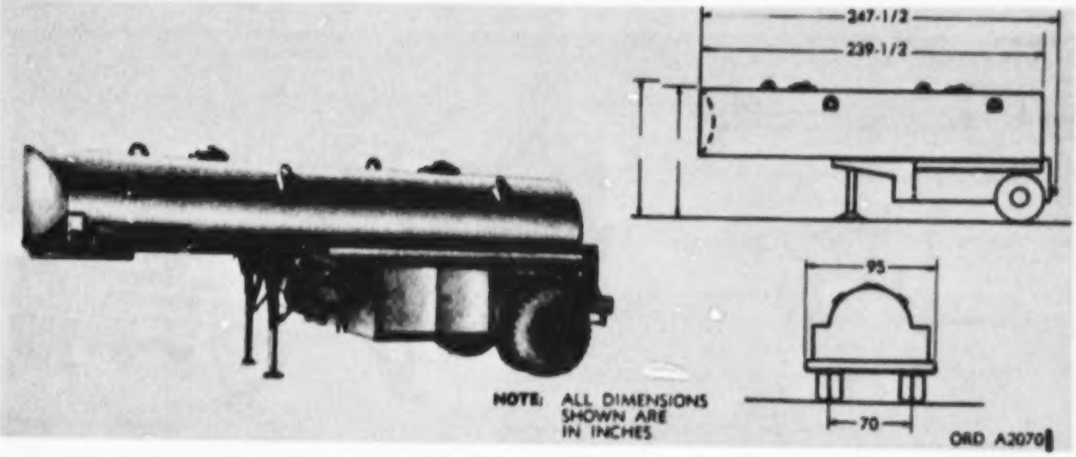
*For characteristics and data, see item in section 21.

SEMITRAILER, TANK: WATER, 2,000-gallon, 2-WHEEL, M586



Model	*Line item No.*	*Federal stock No.*
M586	4-38995-20	2330-815-1020

General

SEMITRAILER, TANK: water, 2,000-gallon, 2 wheel, M586 is used for the transporting and storing of drinking water. It has a two-compartment aluminum tank with a heating system and two and one-half inches of sheet fiber glass for insulation. To protect the fiber glass against wear and tear, lagging (referred to as the outer shell) covers the entire tank and consists of thin spot-welded sheets of aluminum.

The main heater for the M586 is an electrically operated gasoline-fired, 60,000-BTU unit of the forced draft type. The M586 is also supplied with a gasoline wick-type emergency heater that does not need electric power.

Differences among models

Data plate location

Classification: Standard A (AMCTC 261).

CHARACTERISTICS

Weight:	
Net	6,424 lb
Payload:	
Hard surface roads	16,600 lb
Cross-country	
Gross:	
Hard surface roads	23,024 lb
Cross country	
Empty:	
Fifth wheel	
Bogie	
Loaded:	
Fifth wheel	9,690 lb
Bogie	13,334 lb
Tires:	
Type	nondirectional, cross-country
Size	9.00 x 20
Ply	10
Pressure:	
Highway	
Cross-country	
Sand	
Tread,	
Ground clearance	17 in.
Height of fifth wheel, land gear down	
Loading height, empty	
Length	247.5 in.
Width	95 in.
Height	94.5 in.
Tank capacity	
Wheelbase	197 in.
Brakes:	
Manufacturer	
Type	Air
Parking, type	Wheel chocks
Heater	electric operated, gasoline fired, 60,000 BTU

PERFORMANCE

Towing speed (max):	
Highway	50 mph
Secondary roads	35 mph
Cross-country	10 mph
Fording depth	15 in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

PRIME MOVER

2½ or 5-ton truck tractor

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 semitrailer:

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

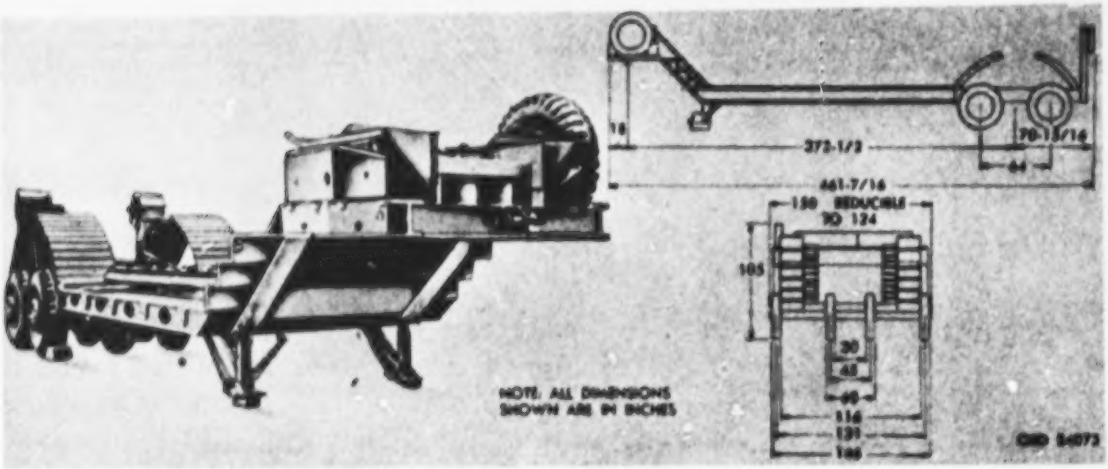
Outside Continental United States

Shipped 1 semitrailer:

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References:

SEMITRAILER, TANK TRANSPORTER: 45-TON, 8-WHEEL, M15A1, W/E
SEMITRAILER, TANK TRANSPORTER: 50-TON, 8-WHEEL, M15A2, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M15A1	4-38985-20	2330-835-8159
M15A2	4-38985-30	2330-508-2533

General

SEMITRAILER, TANK TRANSPORTER: 45-ton, 8-wheel, M15A1, w/e and SEMITRAILER, TANK TRANSPORTER: 50-ton, 8-wheel, M15A2, w/e transport damaged tanks and materiel up to weights of 90,000 and 100,000 pounds on improved roads, respectively.

The semitrailer is designed to be pulled by a tractor truck and consists of a low drop frame having a low bed-type platform. Eight single wheels with pneumatic tires support the semitrailer. Brakes on the semitrailer wheels are actuated by compressed air supplied from the truck tractor.

Differences among models

The differences between the semitrailers M15A1 and M15A2 lie in the extensive modifications applied to the M15A1, which make the M15A2. These modifications include heavy reinforcement of the trailer frame, wider body to accept the larger tracks of the later heavier tanks, installation of truck guides, and removal of large stowage compartments on forward end of the trailer. The weight distribution is as indicated under "CHARACTERISTICS."

Data plate location

Classification: Standard B (OTCM 37119)

CHARACTERISTICS

M15A1:	
Weight:	
Net	42,370 lb
Payload	90,000 lb
Gross	132,370 lb
Empty:	
Fifth wheel	14,170 lb
Rear bogie	28,200 lb
Loaded:	
Fifth wheel	57,500 lb
Rear bogie	74,870 lb
Ground clearance (min)	13 in.
Height, loading	40⅛ in.
Height of fifth wheel, landing gear down	67⅜ in.
Brakes:	
Manufacturer	Fruehauf
Type	air
Parking	none
Tires:	
Size	14.00 x 24
Ply	20
Pressure:	
Highway	90 psi
Cross country	
Sand	
M15A2:	
Weight:	
Net	42,600 lb
Payload	100,000 lb
Gross	142,600 lb
Empty:	
Fifth wheel	13,100 lb
Rear bogie	29,500 lb
Loaded:	
Fifth wheel	44,780 lb
Rear bogie	97,820 lb
Ground clearance (min)	13 in.
Height, loading	40⅛ in.
Height of fifth wheel, landing gear down	67⅜ in.
Brakes:	
Manufacturer	Fruehauf
Type	air
Parking	none
Tires:	
Size	14.00 x 24
Ply	20
Pressure:	
Highway	90 psi
Cross country	
Sand	

PERFORMANCE

Towed speed (max):	
Improved road	26 mph

EQUIPMENT

Basic Issue Items: See TM 9-767.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 12-ton, 6 x 6, M26 or M26A1*
TRUCK, TRACTOR: 10-ton, 6 x 6, M123*

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* For characteristics and data, see items on pages 21-76 and 21-77.

STORAGE AND SHIPMENT DATA

Within Continental United States

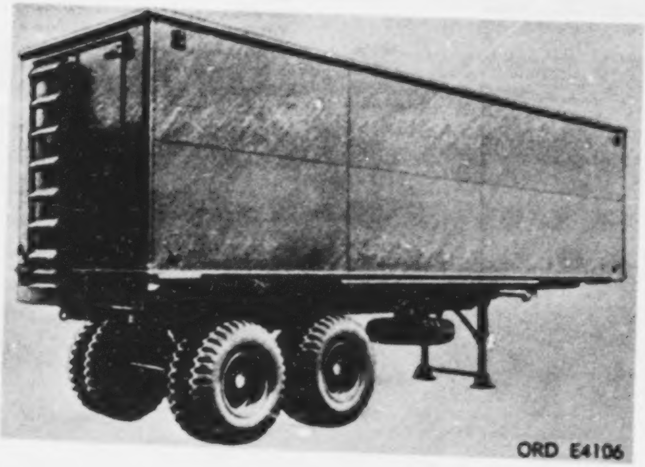
Shipped	
Length	461⅛ in.
Width	146 in.
Height	105 in.
Volume	3,490 cu ft
Area	398 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9–767, SNL G–160

SEMITRAILER, VAN: CARGO, 12-TON, 4-WHEEL, M128A1 AND M128A1C, W/E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Model	*Major item Line item No.*	*Federal stock No.*
M128A1	4-39008-02	2330-679-5581
M128A1C	4-39008-10	2330-752-9751

General

SEMITRAILER, VAN: cargo, 12-ton, 4-wheel, M128A1 and M128A1C, w/e, consists essentially of a van-type body mounted on the chassis M126A1 or M126A1C* respectively and provides a van-type semitrailer in the 12-ton class for carrying military cargo and supplies.

The body frames are made of square steel tubings.

Access to the interior of the vans is provided by two doors located on the rear of the body.

A step ladder is provided to aid in entering and leaving the semitrailers.

The interior of both semitrailers is covered with ¾-inch plywood.

The semitrailers are used as cargo carriers over rough terrain or paved highways.

Differences among models

The M128A1C differs from the M128A1 in that it is equipped with turn signal lamps, mud flaps, and dock bumpers.

Data plate location

The identification plate is located on the right side of the front end of the chassis frame rail.

Classification

M128A1 —Standard B
M128A1C—Standard A

CHARACTERISTICS

Type	semitrailer van body
Curbweight	15,480 lb
Weight:	
Net:	
Fifth wheel:	
Highway	19,610 lb
Cross country	14,593 lb
Axle:	
Highway	31,840 lb
Cross country	24,857 lb
Gross (including body and payload):	
Highway	51,480 lb
Cross country	39,480 lb
Fifth wheel:	
Height empty	48 in.
To centerline of axle	241 in.
To centerline of landing gear	78 in.
Ground clearance (min)	10½ in.
Departure angle (loaded)	50°
Tread, center-to-center	72 in.
Landing gear	2 speed, manual
Axle:	
Type	tubular
Manufacturer	Standard Forge and Axle Co.
Quantity	2
Spring type: semielliptical	
Size	4 wide x 52 long
Number of leaves	12
Rate of deflection	6,150 lb in.
Auxiliary springs	none
Shock absorbers type	none
Wheels, type, single or duals	Tandem (4) dual
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	50 psi
Cross country	50 psi
Sand	15 psi
Brake, Service:	
Manufacturer	Timken
Type	air-over-hydraulic, 2 shoe, cam action
Drum size	16 dia x 5½w
Actuation	air-over-hydraulic
Parking brake	Wheel chocks
Electrical system:	
Potential	12-24 volts
Tail lamps:	
Stop, turn:	
Left hand	12 volt
Right hand	12 volt
Stop blackout:	
Left hand	24 volt
Right hand	24 volt

EQUIPMENT

Basic Issue Items: See TM 9-2330-207-14.

PERFORMANCE

Fording depth	55 in.
Maximum towing speed:	
Cross country	30 mph
Highway	50 mph

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 5-ton, 6 x 6, M52**.

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* For characteristics and data, see item on page 22-5.

** For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	350 in.
Width	97 in.
Height	(reduced to 92 in.) 143 in.
Volume	1,807 cu ft
Area	235.7 sq ft
Gross weight	
Ship tons	

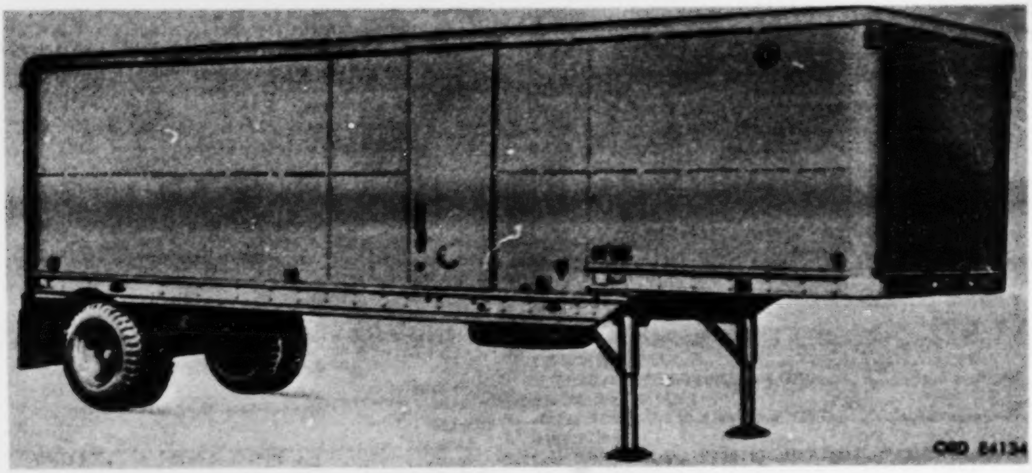
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-207-14, SNL G-750, TM 9-2330-207-24P

SEMITRAILER, VAN: ELECTRONIC, 3-TON, 2-WHEEL, M348A1 AND M348A2; SEMITRAILER, VAN: ELECTRONIC, 6-TON, 2-WHEEL, M348A2C, M348A2D, M348A2F, AND M348A2G



Major item

Shown: M348A1

Model	***Line item No.***	***Federal stock No.***
M348A1	4–39012–25	2330–696–5695
M348A2	4–39013–05	2330–678–3838
M348A2C	4–39013–10	2330–690–7724
M348A2D	4–39013–15	2330–690–7725
M348A2F	4–39013–20	2330–690–7726
M348A2G		

General

SEMITRAILER, VAN: electronic, 3-ton, 2-wheel, M348A1, and M348A2; SEMITRAILER, VAN: electronic, 6-ton, 2-wheel, M348A2C, M348A2D, M348A2F, and M348A2G have an integral body and frame, fully insulated, and are designed to transport electronic equipment and other similar delicate items on either highway or cross country, using a 2½-ton, 6 x 6 truck tractor or equivalent as the towing vehicle. The semitrailers are provided with an easily removable undercarriage to facilitate air transport.

The undercarriage consists of wheels and tires, hubs and brake drums, springs and axle, and a suspension frame assembly. The trailers have a pintle on the rear of the suspension assembly to provide for tandem towing.

The landing gear assemblies are attached near the forward end of the chassis. Each assembly consists of a ratchet crank, upper leg assembly, and lower leg assembly. Each landing gear assembly is individually operated by the ratchet crank which is stowed under the chassis and secured with a chain. Each landing gear assembly is manually operated through a 2-speed gear box. The high-speed gear is provided for fast raising and lowering of the feet or wheels when there is no load on them. The low speed gear serves to furnish greater power for raising the front end of the vehicle when the feet or wheels are in contact with the ground.

Jack assemblies are attached to the suspension assembly at each rear corner. A spare tire carrier, ladder assembly, tarpaulin and bows, chock blocks, and an electrical system are also provided.

Differences among models

All models have a curbside personnel door and an access door in the rear. The semitrailers M348A2C, M348A2D, and M348A2F also have an access door in the front end. Semitrailer M348A1 has a front partition; the M348A2C, M348A2D, and M348A2F have no inside partition. Semitrailers M348A2C, M348A2D, and M348A2F have the spare tire carrier mounted on the suspension dolly, while the semitrailer M348A1 has the spare tire carrier bolted under the right side of the chassis. The semitrailer M348A1 has 11-leaf springs; the springs for semitrailers M348A2C, M348A2D, and M348A2F are 9-leaf. The lower leg assembly of semitrailer M348A1 has a foot pad; the semitrailer M348A2 has a wheel. The tarpaulin for semitrailer M348A1 is kept inside when not in use; the tarpaulin for semitrailers M348A2C, M348A2D, and M348A2F is stowed in a compartment in the underside of the chassis. The two triangular chock blocks for semitrailer M348A1 are stowed ahead of the rear wheels and for semitrailers M348A2C, M348A2D, and M348A2F they are stowed behind the wheels. Semitrailer M348A1 has one personnel ladder, and semitrailers M348A2C, M348A2D, and M348A2F have two ladders. A 12-foot access ladder is mounted under the center of the chassis on semitrailers M348A2C, M348A2D, and M348A2F only.

Data plate location

The identification plate (nameplate) for semitrailer M348A1 is located on the outer right wall just above the landing gear. The identification plate for semitrailers M348A2, M348A2D, and M348A2F is located under the trailer on the chassis near the left landing gear.

Classification

M348A1 —Standard B (OTCM 37317)
M348A2 —Standard A (OTCM 37317)
M348A2C—Standard A (OTCM 37317)
M348A2D—Standard A (OTCM 37317)
M348A2F—Standard A (OTCM 37317)
M348A2G—

CHARACTERISTICS

3-ton semitrailers M348A1 and M348A2:

Type	semitrailer van body
Weight:	
Net	8,650 lb
Payload:	
Cross country	6,000 lb
Highway	10,000 lb
Gross:	
Cross country	14,650 lb
Highway	18,650 lb
Length (overall)	318½ in.
Width (overall)	95½ in.
Height (overall)	132 in.
Ground clearance	16½ in.
Track (tread, center-to-center of tires)	70 in.
Angle of departure (loaded)	44°
Axle:	
Type	Ordnance, tubular, single
Rating	14,000 lb

CHARACTERISTICS—Continued

3-ton semitrailers M348A1 and M348A2—Continued
  Landing gear:
    Manufacturer.......Austin Equipment Co.
    Type.......two-2 speed vertical screws
  Wheels, type.......dual
  Tires:
    Size.......9.00 x 20
    Ply.......8
    Tread design.......NDCC
    Pressure:
      Highway.......50 psi
      Cross country.......50 psi
      Sand and snow.......15 psi
  Brakes:
  Service:
    Size of drum.......15 x 3
    Actuation.......air-hydraulic
  Parking, type.......chock blocks
  Electrical system:
    Potential.......24 volt
    Tail lamps:
      LH.......ORD No. 8378785
      RH.......ORD No. 8378785
    Blackout lamps.......ORD Nos. 8741645, 7261916, 7261917, 7261918, and 7261919
    Clearance lights.......ORD Nos. 7261916, 7261917, 7261918, and 7261919

6-Ton semitrailers M348A2C, M348A2D, M348A2F, and M348A2G:
  Type.......semitrailer van body
  Weight:
    Net.......8,770 lb
    Payload.......12,000 lb
    Gross.......20,770 lb
  Length (overall).......318⅝ in.
  Width (overall).......95½ in.
  Height (overall).......132 in.
  Length (inside).......313½ in.
  Width (inside).......89½ in.
  Height (inside).......79½ in.
  Ground clearance.......16½ in.
  Track (tread, center-to-center of tires).......70 in.
  Angle of departure.......41°
  Landing gear:
    Manufacturer.......Austin Trailer Equipment Co.
    Type.......ratchet
  Wheels, type.......offset disk with removable split rings
  Tires:
    Size.......9.00 x 20
    Ply.......8
    Pressure:
      Highway.......50 psi
      Cross country.......35 psi
      Sand.......15 psi
  Brakes:
    Service.......air-over-hydraulic
  Parking.......none
  Electrical system:
    Taillights:
      RH and LH.......ORD No. 7952760
    Blackout stoplight.......ORD No. 8741645
    Clearance lights.......ORD No. 7261919

  Tire carrier:
    Manufacturer.......Miller Trailer Co.
    Type.......ratchet

PERFORMANCE

3-ton semitrailers:
  Towing speed (max):
    Cross country.......30 mph
    Highway.......50 mph
6-ton semitrailers:
  Towing speed (max):
    Cross country.......30 mph
    Highway.......50 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-246-14.

INSTRUCTIONAL MATERIAL

PRIME MOVER

3-ton semitrailers:
  Truck tractor: 2½ ton, 6 x 6
6-ton semitrailers:
  Truck tractor: 5 ton, 6 x 6

STORAGE AND SHIPMENT DATA

3-ton semitrailer:

Within Continental United States

Shipped
  Length.......324 in.
  Width.......96 in.
  Height.......131 in.
  Volume (uncrated).......2,376 cu ft
  Gross weight.......
  Ship tons.......59.4

Outside Continental United States

Shipped
  Length.......
  Width.......
  Height.......
  Volume.......
  Gross weight.......
  Ship tons.......

6-ton semitrailer:

Within Continental United States

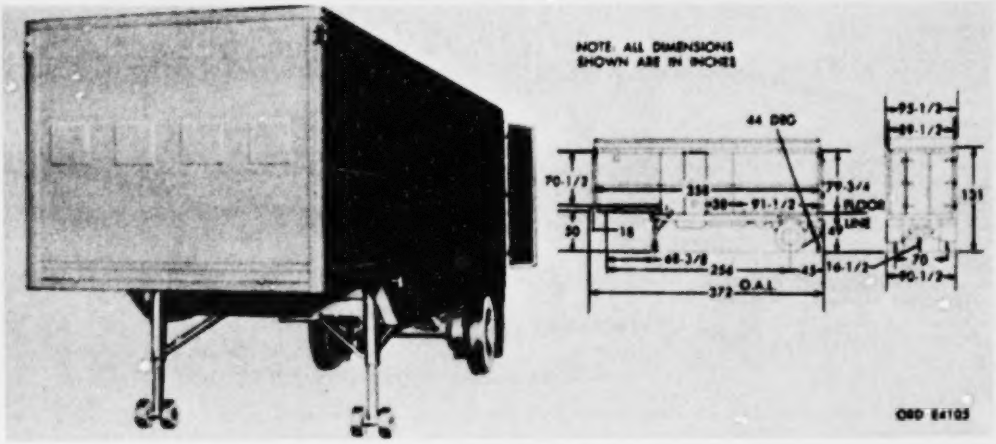
Shipped
  Length.......
  Width.......
  Height.......
  Volume.......
  Gross weight.......
  Ship tons.......

Outside Continental United States

Shipped
  Length.......
  Width.......
  Height.......
  Volume.......
  Gross weight.......
  Ship tons.......

References: SNL G-848, TM 9-2330-246-14

SEMITRAILER, VAN: ELECTRONIC, 3-TON, 2-WHEEL, M373A1; SEMITRAILER, VAN: ELECTRONIC, 6-TON, 2-WHEEL, M373A2C



Major Item

Model	*Line item No.*	*Federal stock No.*
M373A1	4-39012-40	2330-696-5696
M373A2C	4-39013-30	2330-672-7496

General

SEMITRAILER, VAN: electronic, 3-ton, 2-wheel, M373A1, and 6-ton 2-wheel, M373A2C, is used to transport electronic equipment on highway and cross country.

Each semitrailer is provided with a curbside personnel door and a front partition, has a 24-volt electrical system supplied with current from the truck tractor, is equipped with landing gear and a jack assembly is attached to each corner of rear frame. An easily removable undercarriage is provided to facilitate air transport, body is fully insulated, and is integral with the frame.

Differences among models

Data plate location

Nameplate is located on the outer right wall just above the landing gear and agency plate is located on the right side of the chassis under the nameplate. Dolly removal instruction plate is located on the rear, right side of the chassis, and landing gear operation plate on the right side of the chassis under the nameplate.

Classification:

M373A1—Standard B (OTCM 37317)
M373A2C—Standard A (OTCM 37317)

CHARACTERISTICS

Tires:	
Size	9.00 x 20
Ply	8
Number	4
Pressure:	
Highway	50 psi
Cross country	50 psi
Sand driving	15 psi
Electrical system:	
Potential	24 volt
Taillights:	
Left and right	2
Center (blackout stop)	1
Clearance Lights:	
Front	4
Rear	4
Services brakes	air-over-hydraulic
Clearances	16½ in.
Length:	
M373A1	372 in.
M373A2C	369⅝ in.
Width:	
M373A1	95½ in.
M373A2C	95⅝ in.
Height:	
M373A1	131 in.
M373A2C	92½ in.
Weight:	
Curb weight:	
M373A1	9,500 lb
M373A2C	9,700 lb
Loaded:	
M373A1	15,500 lb
M373A2C	21,700 lb

PERFORMANCE

Fording depth same as towing vehicle.

EQUIPMENT

Basic Issue Items: See TM 9-2330-228-15.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 6 x 6, 2½-or 5-ton.[°]

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	2,728 cu ft
Area	
Gross weight	
Ship tons	68.10

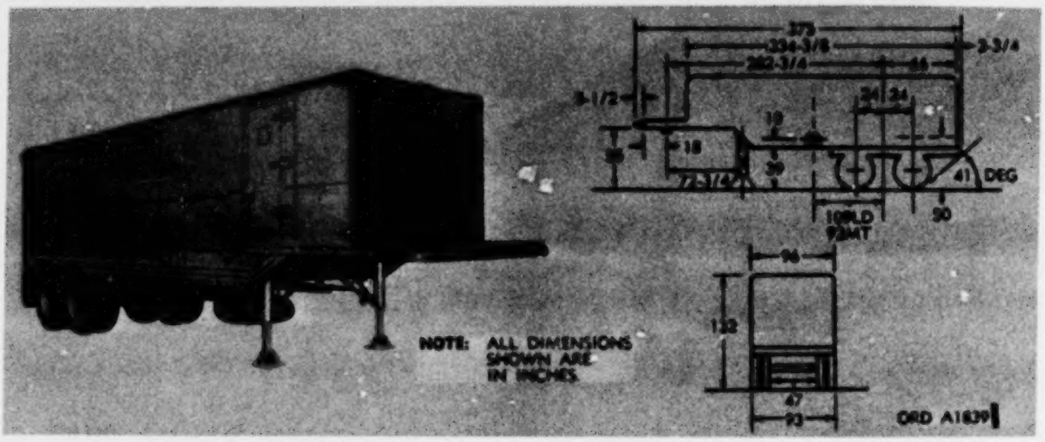
Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-228-15.

[°] For characteristics and data, see item in section 21.

SEMITRAILER, VAN: ELECTRONIC, 10-TON, 4-WHEEL, XM557



Model	*Line item No.*	*Federal stock No.*
XM557		2330-525-1323

General

SEMITRAILER, VAN: electronic, 10-ton, 4-wheel, XM557 is a special purpose vehicle designed to house equipment employed for missile monitoring. The semitrailer has seven access panels and a personnel door on the right side, eleven access panels on the left side, and a personnel door at the rear.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight:	
Net	13,070 lb
Payload	14,740 lb
Gross	27,810 lb
Empty:	
Fifth wheel	
Rear wheels	
Loaded:	
Fifth wheel	
Rear wheels	
Length overall	375 in.
Kingpin to front	18 in.
Kingpin to center of axle bogie	282¾ in.
Width overall	96 in.
Height overall	132 in.
Fifth wheel height	55 in.
Ground clearance	
Angle of departure	41 deg
Tread:	
Center to center	
Outside to outside	93 in.
Landing gear:	
Manufacturer	
Type	2 speed, retracting
Tires:	
Number	8
Size	9.00 x 20
Ply	8
Pressure:	
Highway	70 psi
Cross-country	
Sand	
Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking	none
Electrical system:	24 volt
Taillight:	
Manufacturer	
Left	
Right	
Clearance lights	12

PERFORMANCE

Towed speed (max):	
Highway	
Cross-country	

PRIME MOVER

EQUIPMENT

Basic Issue Items: See TM 9-2330-257-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 semitrailer, uncrated.

Length	
Width	
Height	
Volume	2,750 cu ft
Area	
Gross weight	
Ship tons	

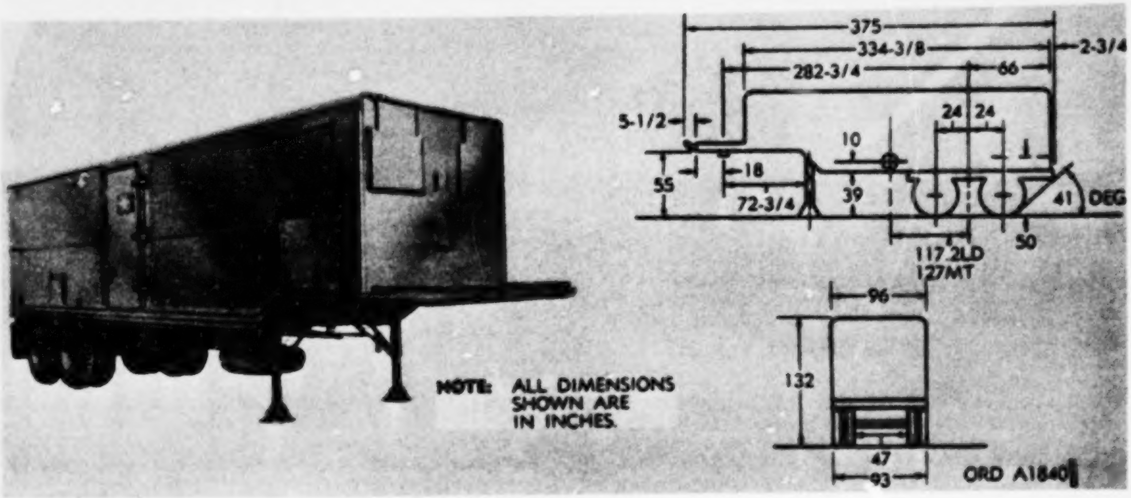
Outside Continental United States

Shipped 1 semitrailer, uncrated.

Length	
Width	
Height	
Volume	2,750 cu ft
Area	
Gross weight	
Ship tons	

References: TM 9-2330-257-14, TM 9-2330-257-24P, TM 9-2300-223-20P.

SEMITRAILER, VAN: ELECTRONIC, 10-TON, 4-WHEEL, XM558



Model	*Line item No.*	*Federal stock No.*
XM558		2330-525-1324

General

SEMITRAILER, VAN: electronic, 10-ton, 4-wheel, XM558 is a special purpose vehicle designed to house equipment employed for missile monitoring. The semitrailer has four access panels and a personnel door on the right side, five access panels on the left side, and a personnel door at the rear.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight:	
Net	18,260 lb
Payload	16,770 lb
Gross	35,030 lb
Empty:	
Fifth wheel	
Rear wheels	
Loaded:	
Fifth wheel	
Rear wheels	
Length overall	375 in.
Kingpin to front	18 in.
Kingpin to center of axle bogie	282¾ in.
Width overall	96 in.
Height overall	132 in.
Fifth wheel height	55 in.
Ground clearance	
Angle of departure	41 deg
Tread:	
Center to center	
Outside to outside	93 in.
Landing gear:	
Manufacturer	
Type	2 speed, retracting
Tires:	
Number	8
Size	9.00 x 20
Ply	8
Pressure:	
Highway	70 psi
Cross-country	
Sand	

Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking	None
Electrical system	24 volt
Taillight:	
Manufacturer	
Left	
Right	
Clearance lights	12

PERFORMANCE

Towed speed (max):	
Highway	
Cross-country	

PRIME MOVER

EQUIPMENT

Basic Issue Items: See TM 9-2330-257-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

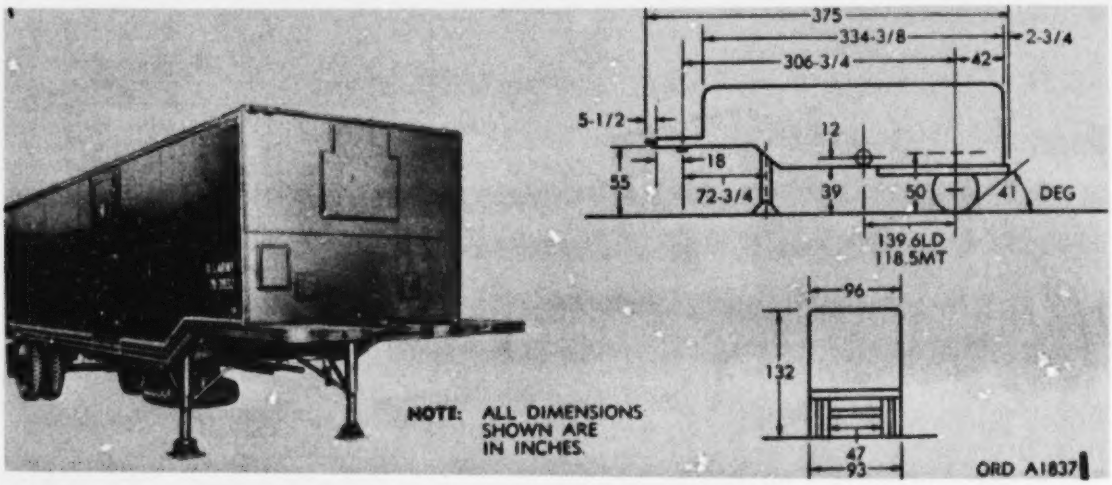
Shipped 1 semitrailer, uncrated	
Length	
Width	
Height	
Volume	2,750 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 semitrailer, uncrated	
Length	
Width	
Height	
Volume	2,750 cu ft
Area	
Gross weight	
Ship tons	

References: TM 9-2330-257-14, TM 9-2330-257-24P, TM 9-2300-223-20P.

SEMITRAILER, VAN: ELECTRONIC SHOP, 6-TON, 2-WHEEL, XM555



Model	*Line item No.*	*Federal stock No.*
XM555		2330-529-8619

General

SEMITRAILER, VAN: electronic shop, 6-ton, 2-wheel, XM555 is a special purpose vehicle designed as a mobile electronic shop used in support of a missile monitoring system. The semitrailer has an access panel, a personnel door, and an exhaust opening on the right side, a personnel door at the rear, and an access panel on the left side.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight:	
Net	10,920 lb
Payload	7,103 lb
Gross	18,023 lb
Empty:	
Fifth wheel	
Rear wheels	
Loaded:	
Fifth wheel	
Rear wheels	
Length overall	375 in.
Kingpin to front	18 in.
Kingpin to center of axle	306¾ in.
Width overall	96 in.
Height overall	132 in.
Fifth wheel height	55 in.
Ground clearance	
Angle of departure	41 deg
Tread:	
Center to center	
Outside to outside	93 in.
Landing gear:	
Manufacturer	
Type	2 speed, retracting
Tires:	
Number	4
Size	9.00 x 20
Ply	8
Pressure:	
Highway	70 psi
Cross-country	
Sand	
Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking, type	
Electrical system	24 volt
Taillight:	
Manufacturer	
Left	
Right	
Clearance lights	12

PERFORMANCE

Towed speed (max):	
Highway	
Cross-country	

PRIME MOVER EQUIPMENT

Basic Issue Items: See TM 9-2330-257-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

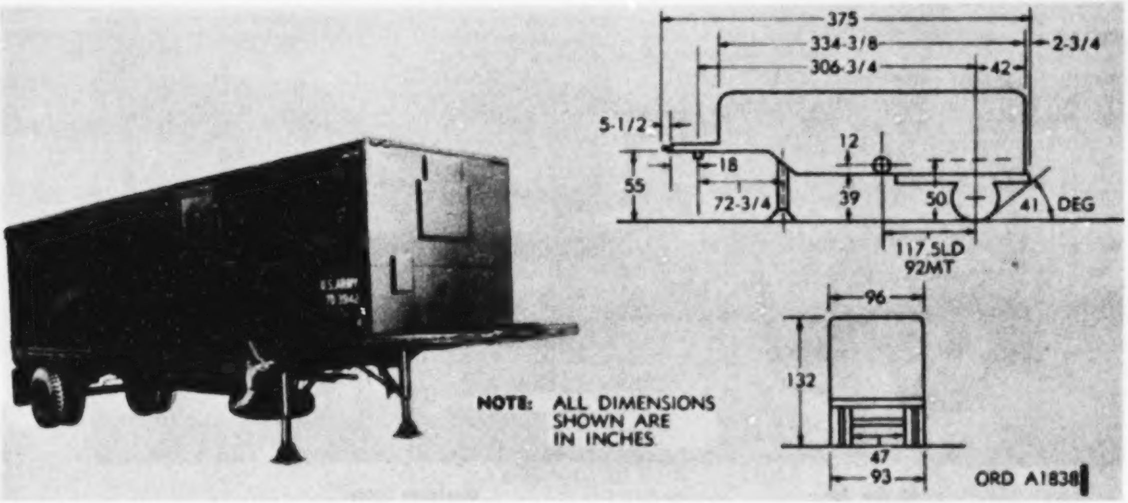
Shipped 1 semitrailer, uncrated	
Length	
Width	
Height	
Volume	2,750 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 semitrailer, uncrated	
Length	
Width	
Height	
Volume	2,750 cu ft
Area	
Gross weight	
Ship tons	

References: TM 9-2330-257-14, TM 9-2330-257-24P, TM 9-2300-223-20P.

SEMITRAILER, VAN: ELECTRONIC SHOP, 6-TON, 2-WHEEL, XM556



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD A1838

Model	*Line item No.*	*Federal stock No.*
XM556	----------	2330-525-1318

General

SEMITRAILER, VAN: electronic shop, 6-ton, 2-wheel, XM556 is a special purpose vehicle designed as a mobile electronic shop used in support of a missile monitoring system. The semitrailer has an access panel, a personnel door, and an exhaust opening on the right side, and a personnel door at the rear.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

Weight:
Net ....10,700 lb
Payload ....10,580 lb
Gross ....21,280 lb
Empty:
Fifth wheel ....
Rear wheels ....
Loaded:
Fifth wheel ....
Rear wheels ....
Length overall ....375 in.
Kingpin to front ....18 in.
Kingpin to center of axle........306¾ in.
Width, overall ....96 in.
Height, overall ....132 in.
Fifth wheel height........55 in.
Angle of departure........41 deg
Tread:
Center to center........
Outside to outside........93 in.
Landing gear:
Manufacturer ....
Type ....2 speed, retracting
Tires:
Number 4
Size ....9.00 x 20
Ply 8
Pressure:
Highway ....70 psi
Cross-country ....
Sand ....

Brakes:
Manufacturer ....
Type ....air-over-hydraulic
Parking, type ....
Electrical system ....24 volt
Taillights:
Manufacturer ....
Type ....
Clearance lights 12

PERFORMANCE

Towed speed (max):
Highway ....
Cross-country ....

PRIME MOVER

EQUIPMENT

Basic Issue Items: See TM 9-2330-257-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

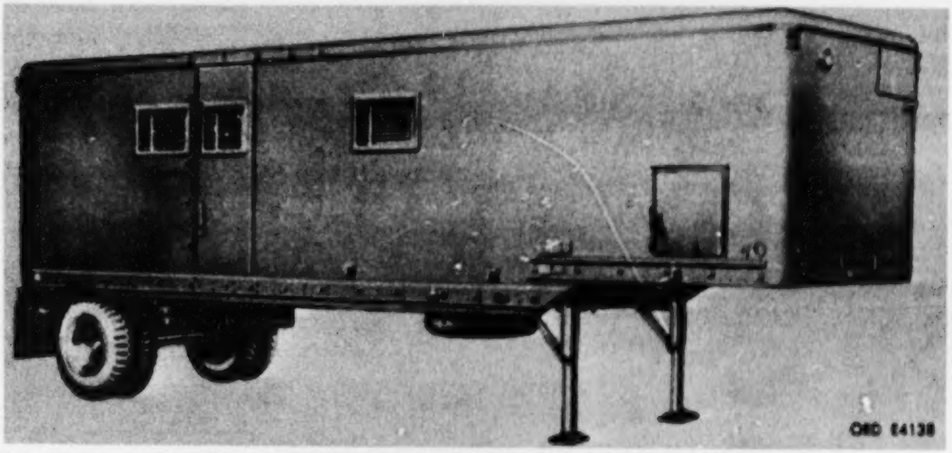
Shipped 1 semitrailer, uncrated:
Length ....
Width ....
Height ....
Volume ....2,750 cu ft
Area ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped 1 semitrailer, uncrated:
Length ....
Width ....
Height ....
Volume ....2,750 cu ft
Area ....
Gross weight ....
Ship tons ....

References: TM 9-2330-257-14, TM 9-2330-257-24P, TM 9-2300-223-20P.

SEMITRAILER, VAN: MEDICAL, 3-TON, 2-WHEEL, M394



Major Item

Model	*Line item No.*	*Federal stock No.*
M394	4-39018-01	2330-320-6988

General

SEMITRAILER, VAN: medical, 3-ton, 2-wheel, M394, is used to provide a mobile unit for housing and transporting medical equipment and supplies on highway and cross country.

Semitrailer has a curbside personnel door and a front partition.

Semitrailer has a 24-volt electrical system supplied with current from the truck tractor and also a 110-volt electrical system which provides for power for fluorescent lights and various wall receptacles. It is also provided with an auxiliary engine-generator unit which can be used to supply 110-volt power.

Semitrailer has an integral body and frame, and is provided with an easily removable undercarriage to facilitate air transport. It has a landing gear near the forward end, and a jack assembly is attached to each corner of rear frame.

Name Plate Location

Name plate is located on the outer right wall just above the landing gear and agency plate is located on the right side of the chassis under the nameplate. Dolly removal instruction plate is located on the rear, right side of the chassis, and landing gear operation plate on the right side of the chassis under the nameplate.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Tires:	
Size	9.00 x 20
Ply	8
Number	4
Pressure:	
Highway	50 psi
Cross country	35 psi
Sand driving	15 psi
Electrical system:	
Semitrailer	24 volt
Equipment	110 volt
Taillights:	
Left and right	2
Center (blackout stop)	1
Clearance lights:	
Front	4
Rear	4
Length	372 in.
Width	95½ in.
Height	131 in.
Weight:	
Net	7,000 lb
Payload	15,000 lb
Gross	22,000 lb

PERFORMANCE

Fording depth	(Same as towing vehicle)

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 2½-ton, 6 x 6 *.

STORAGE AND SHIPMENT DATA

Domestic Pack

Shipped:	
Length	
Width	
Height	
Volume	2,728 cu ft
Gross weight	16,500 lb
Ship tons	68
Area	

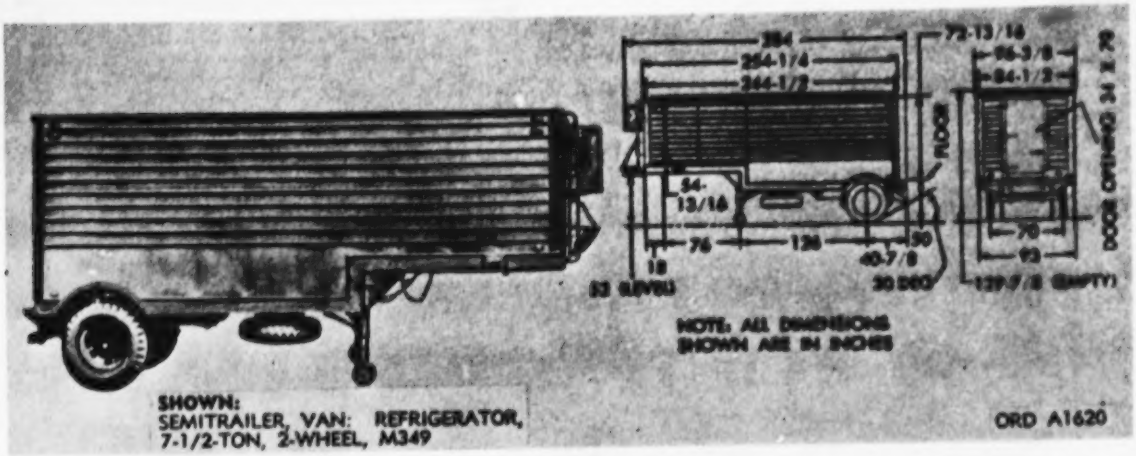
Oversea Pack

Shipped:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Area	

Reference: TM 9-2330-228-15.

* For characteristics and data, see item in section 21.

SEMITRAILER, VAN: REFRIGERATOR, 7½-TON, 2-WHEEL, M349 AND M349A1



SHOWN:
SEMITRAILER, VAN: REFRIGERATOR,
7-1/2-TON, 2-WHEEL, M349

ORD A1620

Major item

Model	*Line item No.*	*Federal stock No.*
M349		2330-030-2126
M349A1		2330-348-7799

General

The SEMITRAILER, VAN: refrigerator, 7½-ton, 2-wheel, M349 and M349A1 is used to provide refrigerated storage space for perishable items, both fresh and frozen, under all weather conditions. The aluminum body and subframe is mounted on a steel undercarriage supported by semielliptic springs attached to a dual wheel standard 14,000-pound load rated Ordnance axle. The semitrailer has a vertical screw-type front landing gear, interior and exterior lighting system, braking system, spare wheel, fixed ladders and platform, toolboxes, battery box, and auxiliary equipment.

Differences among models

Data plate location

Data plate is located on the lower right front sill of the vehicle.

Classification

M349 —Standard B (OTCM 36841)
M349A1—Standard A (OTCM 36841)

CHARACTERISTICS

Body type	van
Weight:	
M349	(net) 7,970 lb
M349A1	(net) 8,600 lb
Payload, M349, M349A1	15,000 lb
Length, overall:	
M349	284 in.
M349A1	277 in.
Width, overall:	
M349	96⅜ in.
M349A1	96 in.
Height (unloaded):	
M349	129⅞ in.
M349A1	129⅞ in.
Track (c-to-c of tires):	
M349	70 in.
M349A1	70 in.
Tires:	
M349 and M349A1, w/spare	5
Size	9 x 20
Ply	8
Pressure:	
Highway:	
M349	65 psi
M349A1	70 psi
Cross country:	
M349	35 psi
M349A1	45 psi
Sand:	
M349	25 psi
M349A1	45 psi
Brakes:	
M349	air
M349A1	air-over-hydraulic
Lights:	
Exterior	24 volts
Interior	12 volts

PRIME MOVER

TRUCK, TRACTOR: 5-ton, 6 x 6, M52* or similar vehicle with 5th wheel.

PERFORMANCE

Towing speed:	
On highway:	
M349	50 mph
M349A1	55 mph
Off highway:	
M349	25 mph
M349A1	30 mph

EQUIPMENT

Basic Issue Items:	
M349	See TM 9-8244
M349A1	See TM 9-2330-222-15

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped:	
Length	284 in.
Width	96⅜ in.
Height	129⅞ in.

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* For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA—Continued

Within Continental United States—Continued

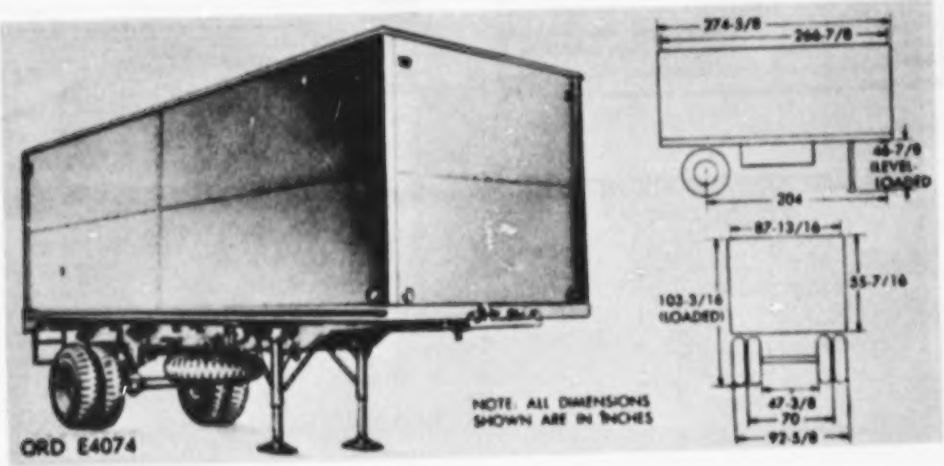
Volume:	
M349 (w/o refrigerator unit)	1,080 cu ft
M349A1	1,080 cu ft
Area:	
M349	169 sq ft
M349A1	169 sq ft
Gross weight	22,070 lb
Ship tons	49.50

Outside Continental United States

Shipped	
Length	284 in.
Width	96⅝ in.
Height	129⅝ in.
Volume	1,080 cu ft
Area	169 sq ft
Gross weight	22,070 lb
Ship tons	49.5

References: SNL G-615, SNL G-690, TM 9-8944, TM 9-2330-222-15, TM 9-2330-222-24P, and TM 9-2330-221-24P

SEMITRAILER, VAN: CARGO, 6-TON, 2-WHEEL, M119 AND M119A1, W/E



ORD E4074

Model	*Major item Line item No.*	*Federal stock No.*
M119	4-39006-10	2330-835-8122
M119A1	4-39006-01	2330-679-5582

General

SEMITRAILER, VAN: cargo, 6-ton, 2-wheel, M119 and M119A1, w/e, is cargo carrier intended for use on highway or cross country. The semitrailers M119 and M119A1 consist of a van body mounted on a 6-ton, 2-wheel, chassis semitrailer M117. The frames (body and chassis), springs, axles, wheels, brake systems, landing gears, rear step assembly, towing facilities, and spare tire carriers of both semitrailers are identical. The body of the semitrailer consists of the van (constructed of angle iron framework and covered on the outside with sheet metal and on the inside with plywood lining panels), floor assembly, bolsters, outriggers, crossmembers, and side members. The chassis of the semitrailer consists of the chassis frame supported by semielliptical springs mounted on an axle, which is supported by dual wheels.

Differences among models

Semitrailer M119 has air-operated brakes. Semitrailer M119A1 has air-over-hydraulic brakes.

Data plate location

The identification plates (nameplates) on each semitrailer are fastened to the crossmember of the chassis frame just above the pickup plate.

Classification:

M119 —Standard B (OTCM 36876)
M119A1—Standard A (OTCM 37119)

CHARACTERISTICS

Type	semitrailer van body
Weight:	
Net	7,180 lb
Payload:	
Cross-country	12,000 lb
Highway	16,200 lb
Gross:	
Cross-country	19,180 lb
Highway	23,380 lb
Length (overall)	274⅝ in.
Width (overall)	95⅝ in.
Height (overall)	132⅞ in.
Ground clearance	19¼ in.
Tread:	
Center-to-center	70 in.
Outside-to-outside	92⅝ in.
Landing gear:	
Manufacturer	Homan and Co.
Type	2-speed retractable
Wheels, type	dual, pressed steel vertical
Tires:	
Size	9.00 x 20
Ply	8
Tread design	
Pressure:	
Highway	50 psi
Cross-country	35 psi
Sand	15 psi
Brakes:	
Service:	
Size of drum	
Actuation	
Parking, type	hand-lever operated
Electrical system:	
Taillights:	
Manufacturer	Standard Ordnance Lights
Left	service tail and stop and blackout
Right	blackout tail and stop
Potential	24 volt
Tire carrier	UASN

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2330-257-14.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK TRACTOR: 2½-ton, 6 x 6, M48*.

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*For characteristics and data, see item in section 21.

STORAGE AND SHIPMENT DATA

Within Continental United States

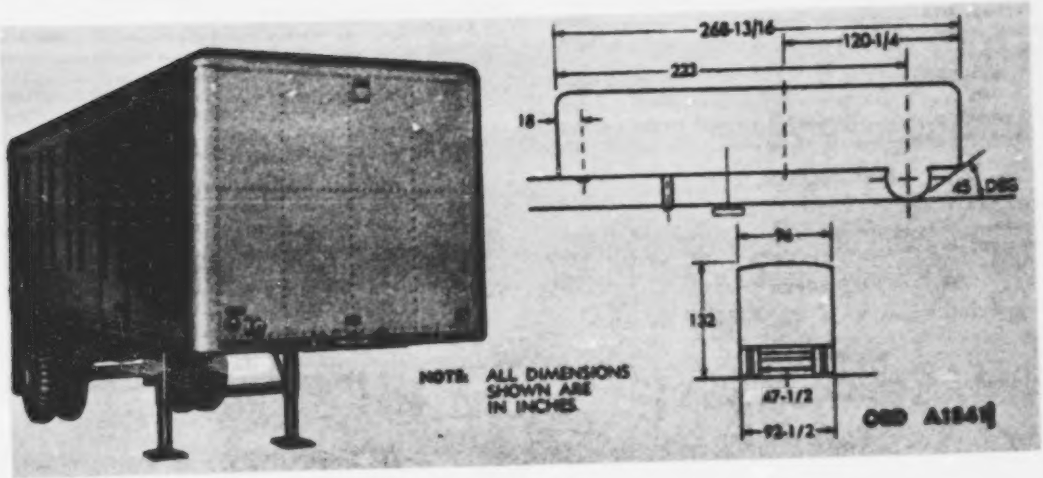
Shipped
Length
Width
Height
Volume 2,023 cu ft
Gross weight
Ship tons 50.575

Outside Continental United States

Shipped
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-2330-210-14, TM 9-2330-210-25P.

SEMITRAILER, VAN: SHOP, 6-TON, 2-WHEEL, M146, M146C, AND M146F



Shown: Semitrailer, M146

Model	*Line item No.*	*Federal stock No.*
M146	4-39021-10	2330-569-9372
M146C	4-39021-11	2330-542-4606
M146F (M146E8)	4-39022-01	2330-015-6620

General

SEMITRAILER, VAN: SHOP, 6-TON, 2-WHEEL, M146, M146C, AND M146F, is designed to provide quarters for field shop equipment. They are intended for use on highway or cross-country with TRUCK TRACTOR: 2½-TON, 6 X 6, M48* or equivalent towing vehicle.

The SEMITRAILER, VAN, M146, is provided with a fully closed van body. A personnel door is located in the right side, and a double loading door is located in the rear end. Each door contains a window. In addition to the door windows, there are four windows on the right side and five on the left side. All windows are provided with sliding blackout panels.

The SEMITRAILER, VAN, M146C, is similar to the M146, but without windows.

The SEMITRAILER, VAN, M146F, is a general purpose vehicle within the Sergeant Missile System. This semitrailer is designed to accept various kits, consisting of racks which provide storage space for spare parts, subassemblies, and assemblies required for performance of direct and general support maintenance (formerly 3d and 4th echelon).

Differences among models:

The M146F is similar to the basic M146 except that the windows and side door are eliminated, floor is improved, and the interior electrical system is modified to be compatible with the Sergeant kit requirements.

Data plate location:

The identification plate is located on the outer right wall just above the landing gear. The agency plate is located below the identification plate.

Classification:

M146 —Standard A (OTCM 36285)
M146C—Standard A (OTCM 36805)
M146F—Standard A (AMCTC item 2834)

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*For characteristics and data, see item in section 21.

CHARACTERISTICS

M146:

Weight:	
Net	6,950 lb
Payload	7,380 lb
Cross-country	12,000 lb
Highway	16,200 lb
Gross:	
Cross-country	19,330 lb
Highway	23,530 lb
Empty:	
Kingpin	2,230 lb
Rear wheels	5,100 lb
Loaded:	
Kingpin	(highway) (max) 8,706 lb
Rear wheels	(highway) (max) 14,000 lb
Length overall	(plate) 268-13/16 in.
Kingpin to front	18 in.
Kingpin to center of axle	205 in.
Width overall	96 in.
Height overall	132 in.
Fifth wheel height	49½ in.
Ground clearance	14 in.
Angle of departure	45 deg
Tread:	
Center-to-center	70 in.
Outside-to-outside	92½ in.
Landing gear:	
Manufacturer	Austin Trailer Equipment Co.
Type	2 speed vertical screw
Tires:	
Number	4
Size	9.00 x 20
Ply	8
Pressure:	
Highway	50 psi
Cross-country	35 psi
Sand	15 psi

CHARACTERISTICS—Continued

M146—Continued

Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking, type	None
Electrical system	24-volt
Taillights:	
Manufacturer	Guide lamp
Left	Combination blackout service and stop
Right	Combination blackout service and stop
Clearance lights	12

PERFORMANCE

Towed speed (max):	
Highway	50 mph
Cross-country	15 mph

PRIME MOVER

TRUCK TRACTOR: 2½-ton, 6 x 6, M48 or similar vehicle.

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 semitrailer, uncrated.

Length	268-13/16 in.
Width	95 in.
Height	132 in.
Volume	2021.7 cu ft
Area	165 sq ft
Gross weight	23,530 lb
Ship tons	50.6

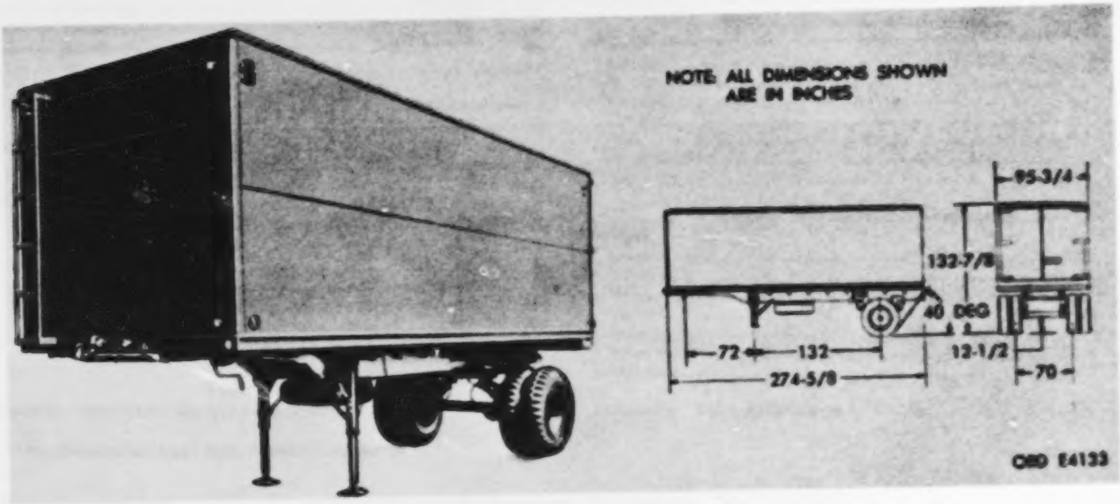
Outside Continental United States

Shipped

Length	268-13/16 in.
Width	95 in.
Height	132 in.
Volume	2021.7 cu ft
Area	165 sq ft
Gross weight	23,530 lb
Ship tons	50.6

References: TM 9–2330–227–14, TM 9–2330–227–24P, TM 9–2300–233–20P.

SEMITRAILER, VAN: SHOP, 6-TON, 2-WHEEL, M508 AND M508C



Model	*Major item Line item No.*	*Federal stock No.*
M508		2330-690-7231
M508C		2330-542-2947

General

SEMITRAILER, VAN: shop, 6-ton, 2-wheel, M508 and M508C, is basically similar to the standard SEMITRAILER, VAN: cargo, M119 except for modifications to house and transport technical equipment necessary for conducting the maintenance and servicing activities for Ordnance special weapons units.

The M508 with mechanical equipment installed is identified as SEMITRAILER, MAINTENANCE: weapon, mechanical unit, M457. M508 with electrical equipment installed is identified as SEMITRAILER, MAINTENANCE: weapon, electrical unit, M458 and M508C with specific equipment installed is identified as SEMITRAILER, MAINTENANCE: weapon, connecting unit, M459. Each semitrailer is designed to be towed by TRUCK, TRACTOR: 2½-ton, 6 x 6, M275* or any truck tractor of sufficient capacity and equipped with a conventional semiautomatic fifth wheel.

For shop operation, the semitrailers M457, M458, and M459 are connected together to form a unit.

Differences among models

The M508 semitrailers have full length doors at the rear while the M508C has two removable doors, one on each side. The M508C also has five air input doors underneath the body, an exhaust port door on the lower front body panel, and a filter access door on the left front upper panel near the roof.

Data plate location

The identification (name) and data plate is located on the cross-member of the chassis at the front above the pickup plate (upper fifth wheel plate).

Classification: Standard A (OTCM 37086).

CHARACTERISTICS

Weight:	
Net	7,180 lb
Payload:	
Cross-country	12,000 lb
Highway	16,200 lb
Gross (including body and payload):	
Cross-country	19,180 lb
Highway	23,380 lb
Distribution:	

	No load	*Cross-Country*	*Highway*
King pin	2,255 lb	7,405 lb	9,220 lb
Axle	4,925 lb	11,775 lb	14,160 lb
Landing gear	3,490 lb	12,000 lb	12,206 lb
Axle	3,690 lb	7,180 lb	11,174 lb

Length	274⅝ in.
Width	95¾ in.
Height	132⅞ in.
Type	van body
Kingpin:	
Height empty from ground	46⅝ in.
To centerline of axle	204 in.
To centerline of landing gear	72 in.
Clearance:	
Ground	min. 19½ in.
Departure angle	40°
Fording depth	55 in.
Tread:	
Inner	70 in.
Landing gear:	
Manufacturer	Homan & Co.
Type	retractable—8 speed
Axle:	
Type	Ordnance standard—14,000-lb cap.

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*For characteristics and data, see item in section 21.

CHARACTERISTICS—Continued

Spring:	
Type	semielliptical
No. of leaves	5
Auxiliary springs:	
No. of leaves	5
Wheels:	
Type	duals
Tires:	
Size	9.00 x 20
Ply	8
Number	
Pressure:	
Highway	
Cross-country	
Sand-driving	

CHARACTERISTICS—Continued

Tires—Continued	
Tread design	NDCC
Pressure (cold)	40 psi
Brakes:	
Service:	
Drum size	15 dia x 3 wide
Actuation	air operated
Emergency relay valve	yes
Air reservoir	yes
Parking:	
Actuation	hand-lever-operated
Mounting	on slack adjuster
Towing speed (recommended):	
Cross country	max 15 mph
Highway	max 50 mph
Electrical system:	
Potential (4 circuits)	208 volts

Circuits:	*No.*	*Volts*
Clearance lights	1	24
Test equipment outlets	2	28
Service lights and outlets	3	110
Climatic unit, hoist, and outlets	4	208

PERFORMANCE

PRIME MOVER

TRUCK, TRACTOR: 2½-ton, 6 x 6, M275*

EQUIPMENT

Basic Issue Items: See TM 9-2330-210-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Area
  Gross weight
  Ship tons

Outside Continental United States

Shipped
  Length
  Width
  Height
  Volume
  Area
  Gross weight
  Ship tons

References: TM 9-2330-210-14

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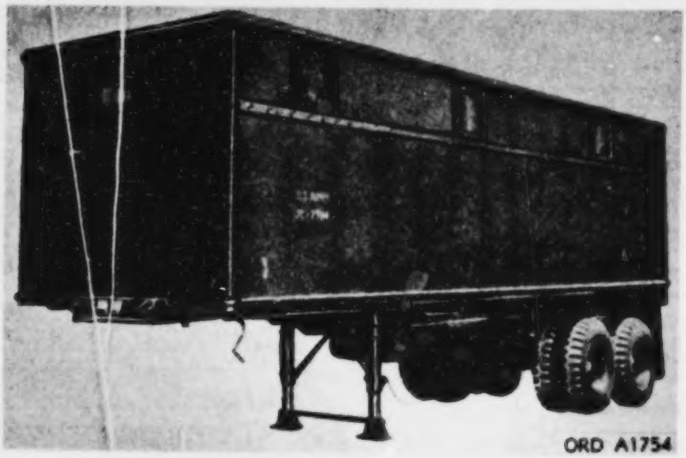
* For characteristics and data, see item in section 21.

SEMITRAILER, VAN: SUPPLY, 12-TON, 4-WHEEL, M129A1 AND M129A1C



Major item

Shown: M129A1

Model	*Line item No.*	*Federal stock No.*
M129A1	----	2330-629-1673
M129A1C	4-39027-05	2330-752-9752

General

SEMITRAILER, VAN: supply, 12-ton, 4-wheel, M129A1 and M129A1C, is used to provide a mobile type unit in the 12-ton class for carrying military supply. Each has a total of seven windows to provide ventilation and light. Sides and roof are insulated and landing legs are supplied.

The towing vehicle supplies the 24-volts current to operate ventilation fan, dome lights, clearance lights, and the 12-volt clearance and taillights. The 110-volt ac dome lights receive their current from an outside source.

Differences among models

M129A1C is essentially the same as M129A1, except that it is equipped with turn signals, mud flaps, and dock bumpers.

Data plate location

An identification plate is located on the right side of the front end of the chassis longitudinal frame rail.

A service plate is located just to the rear of the identification plate.

Classification

M129A1 —
M129A1C—Standard A

CHARACTERISTICS

Length	28 ft, 8⅛ in.
Width	8 ft
Height	11 ft, 7⅝ in.
Weight:	
M129A1	16,020 lb
M129A1C	16,020 lb
Payload:	
Hard surface roads	36,000 lb
Cross country	24,000 lb
Angle of departure	50°
Electrical system:	
Dc	12 and 24 volts
Ac	110 volts
Brakes:	
M129A1	air-hydraulic
M129A1C	air-hydraulic
Wheels	dual
Tires:	
Quantity	8
Size	11.00 x 20
Type	NDCC
Ply	12
Pressure:	
Highway	50 psi
Cross country	30 psi
Sand driving	15 psi

PERFORMANCE

The semitrailer is designed to be towed over prepared roads with loads up to 18 tons at speeds as high as 50 mph and to be towed over unimproved roads, trails, and open rolling terrain with loads up to 12 tons at speeds as high as 30 mph.

PRIME MOVER

TRUCK, TRACTOR: 5-ton, 6 x 6, M52*

EQUIPMENT

Basis Issue Items: See TM 9-2330-207-14, appendix III

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	2,688 cu ft
Gross weight	
Ship tons	67.5

Outside Continental United States

Shipped:	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:: TM 9-2330-207-14, TM 9-2330-207-24P

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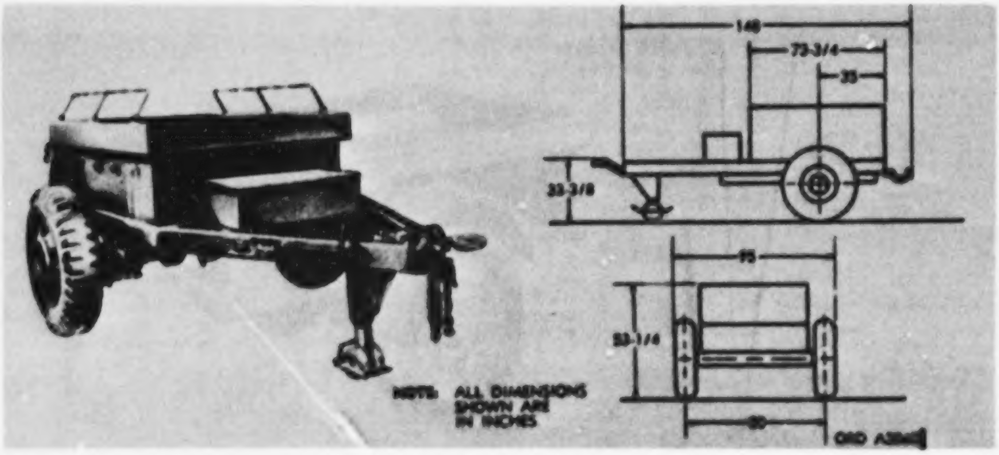
* For characteristics and data, see item in section 21.

TRAILER, AMMUNITION: 1½-TON, 2-WHEEL, M332, W/E



Model	*Line item No.*	*Federal stock No.*
M332, W/E	4-57040-10	2330-200-1785

General

TRAILER, AMMUNITION: 1½-ton, 2-wheel, M332, consists essentially of a frame supported by an axle assembly with leaf spring suspension and a retractable support at the front end.

Differences among models

Data plate location

Classification: Standard A (OTCM 37253).

CHARACTERISTICS

Weight:	
Net	2,800 lb
Payload	3,000 lb
Gross	5,800 lb
Empty:	
Lunette	370 lb
Wheels	2,430 lb
Loaded:	
Lunette	440 lb
Wheels	5,360 lb
Length, overall	148 in.
Width, overall	95⅞ in. 95 in.
Height	48¼ in. 53¼ in.
Lunette height	two-way adjustable 31¼ in. or 35¼ in.
Ground clearance	
Angle of approach	
Angle of departure	
Tread, center to center	80 in.
Tires:	
Size	9.00 x 20
Ply	8
Pressure:	
Highway	35 psi
Cross country	25 psi
Sand	
Brakes:	
Manufacturer	
Type	air-over-hydraulic
Parking brake, type	mechanical

Body, inside dimensions:	
Length	
Width	
Height	
Cargo space	cu ft
Electrical system	24 volts

PERFORMANCE

Maximum towed speed:	
Highway	50 mph
Cross-country	25 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-231-14P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 trailer:	
Length	
Width	
Height	
Volume	435 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 trailer:	
Length	
Width	
Height	
Volume	435 cu ft
Area	
Gross weight	
Ship tons	

References: TM 9-2330-231-14P.

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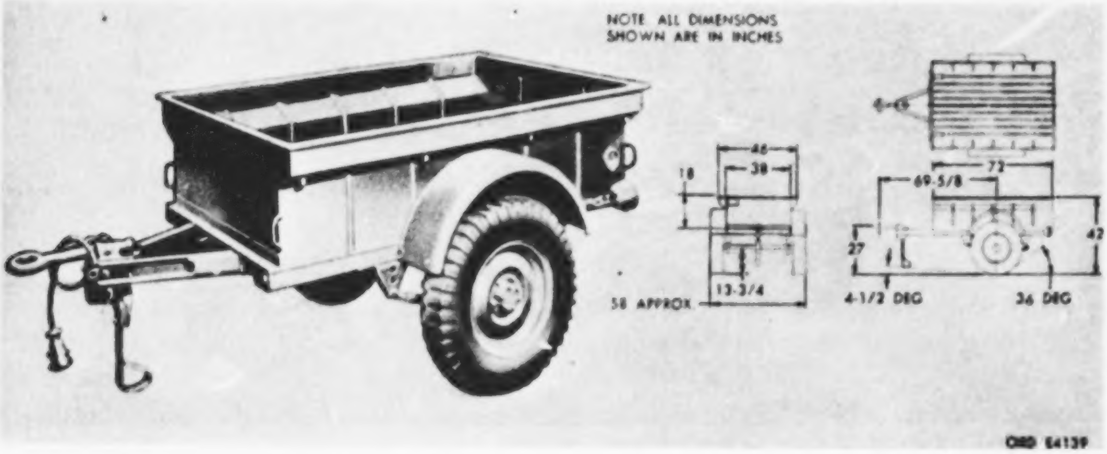
TRAILER, AMPHIBIOUS: CARGO, ¼-TON, 2-WHEEL, M100, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M100	4-57110-20	2330-732-8227

General

TRAILER, AMPHIBIOUS: cargo, ¼-ton, 2-wheel, M100, w/e, is a two-wheel general purpose cargo carrier designed to carry a load of 500 pounds cross-country on land, or water. The body and frame are of one-piece welded construction mounted on a trailer chassis M115.

Two drain valves are provided, one in the front, and one in the rear of the floor.

The trailer is equipped with two taillights which are operated from the towing vehicle. A cable is provided for connecting the trailer electrical system with that of the towing vehicle.

The support leg is a movable support which is used to keep the trailer upright when the trailer is not connected to a towing vehicle. A canvas paulin, which fastens to hooks welded to the body, is provided to cover the trailer top, and is stowed in a metal box, mounted on the left-front body panel, when not in use. A hand lever is mounted on the right-front body panel and is used to lock the brakes when parking the trailer.

Differences among models

Data plate location

The identification plate is located on the front body panel.

Classification: Standard B

CHARACTERISTICS

Weight:	
Net	565 lb
Payload:	
Off highway	500 lb
On highway	750 lb
Gross:	
Off highway	1,065 lb
On highway	1,315 lb
Empty:	
Lunette	70 lb
Axle	495 lb
Loaded:	
Off highway:	
Lunette	81 lb
Axle	984 lb
On highway:	
Lunette	97 lb
Axle	1,218 lb
Tires:	
Size	7.00 x 16
Ply	6
Pressure:	
Highway	
Cross-country	
Sand	
Ground clearance	13¾ in.
Loading height, empty	42 in.
Body inside dimensions:	
Length	72 in.
Width	38 in.
Height	18 in.
Cargo space	28½ cu ft
Parking brake, type	mechanical

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8, SNL G-747, Sec 1

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

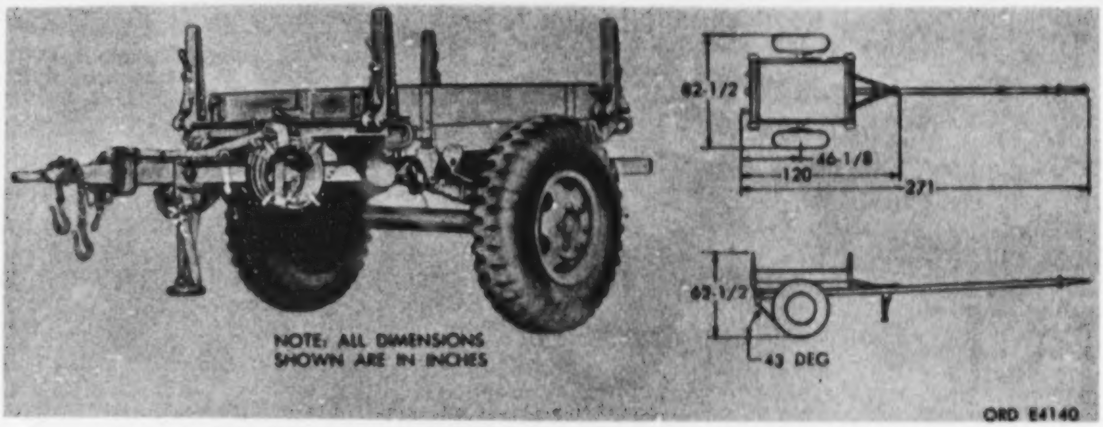
Shipped	
Length	108½ i
Width	56½
Height	42
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-871A, SNL G-747

TRAILER, BOLSTER: POLE HANDLING, 3½-TON, 2-WHEEL, M271 AND M271A1



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD E4140

Major item

Model	*Line item No.*	*Federal stock No.*
M271		2330-834-2167
M271A1		2330-141-8302

General

TRAILER, BOLSTER: pole handling, 3½-ton, 2-wheel, M271 and M271A1, is designed primarily to carry large poles, on highways and/or cross country, and cargo.

The extension tongue is adjustable to two positions.

The entire load of poles is held in position at the rear of the winch cable. The frame of the trailer together with front and rear bolsters form the body of the trailer.

The frame of the trailer is mounted on the main spring leaves and auxiliary spring leaves.

Air-over-hydraulic brakes are provided for each wheel. Parking brakes, one for each wheel are mounted on the left and right sides of each wheel.

Differences among models

Data plate location

The identification plates (nameplates) are located on the right frame member about 1 inch to the rear of the front bumper bracket.

Classification

M271 —Standard B (OTCM 37119)
M271A1—Standard A (OTCM 37119)

CHARACTERISTICS

Type	cart
Curbweight	2,430 lb

	No load highway and cross country (telescoped)	(extended)	(extended)
Weight distribution (lb):			
Lunette eye	141	180	930
Axle	2,199	2,250	8,500
Landing gear	230	615	3,176
Axle	2,200	1,815	6,254

Gross weight including body and payload:	
Highway and cross-country	9,430 lb
Payload	7,000 lb
Lunette data:	
Height empty	35 in.
Minimum ground clearance	17 in.
Departure angle	43 deg
Tread	72 in
Axle type: tubular, single, Ord No. 8719916	
Spring type: semielliptical, Ord No. 8342211	
Size	2½ w x 49 lg
No. of leaves	12
Rate	780 lb per in. under 2,250 lb load
New spring rate will be 820 lb per in.	
Wheels Ord No. 7389618:	
Single or duals	single
Tires:	
Size	11:00 x 20
Ply	12
Pressure:	
Highway	
Cross-country	
Sand	
Tread design	NDCC
Service brakes, ORD No. 8342214, 7411425, 8686922:	
Drum size	15 dia x 3
Actuation	air-hydraulic
Emergency relay valve	none
Air reservoir	none
Parking brake, ORD No. 7411011, 7411012:	
Drum size	15 dia x 3
Actuation	manual
Effective slope	30 percent
Maximum towing speed (mph):	
Cross-country	30
Highway	55
Electrical system:	
Potential	24 volts
Tail lamps and blackout lamps	ORD No. (lh) 7760506 ORD No. (rh) 7760507
Reflectors	ORD No. 506101 ORD No. 506102
Service blackout	ORD No. 8741645

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-782

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

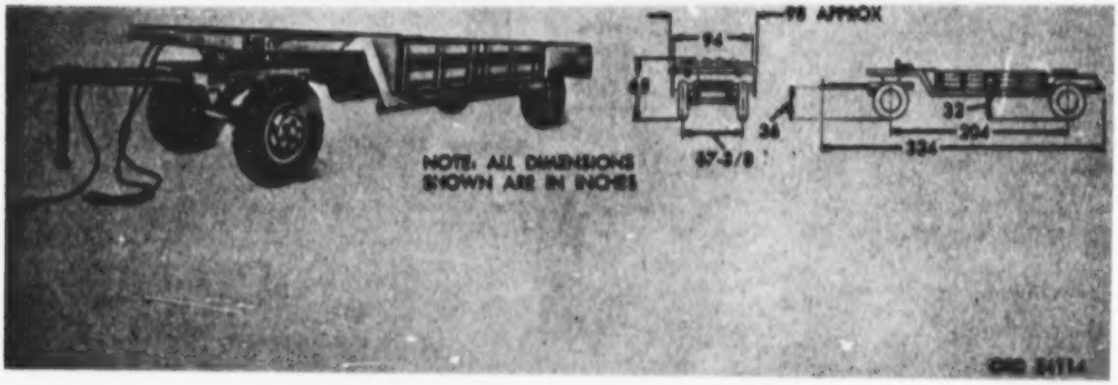
Shipped	
Length	271 in.
Width	58¾ in.
Height	62½ in.
Volume	575.9 cu ft
Area	110.6 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8012, SNL G-783

TRAILER, BOMB: 2-TON, 4-WHEEL, M143 AND M143A1, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M143	4-57130-90	2330-835-8640
M143A1	4-57130-20	2330-563-7247

General

TRAILER, BOMB: 2-ton, 4 wheel, M143 and M143A1, w/e, transports bombs on highway or cross country. It is designed to ford hard bottom water crossings which are capable of being forded by the towing vehicle.

The rear end of the trailer is attached to the rear springs and the front end rides on a 2-wheel dolly. Two compartments with hinged doors are located at the rear of the trailer and act as housings for the rear wheels.

A tool box is located in the rear of each compartment.

Bombs are carried on the drop-center portion of the trailer and are held in place on the bomb racks by chock blocks and chains.

Differences among models

Both models are identical except the length of M143A1 is shorter.

Data plate location

The identification plate is located on the left side between the platform and drop-center portion of the trailer.

Classification

M143 —Standarc B (OTCM 36876).
M143A1—Standard A (OTCM 36876).

CHARACTERISTICS

Type	wagon
Curbweight	6,400 lb
Weight distribution:	no load, cross country-highway
Axle (front)	3450 lb, 5200 lb, 5200 lb
Axle (rear)	2950 lb, 5200 lb, 5200 lb
Gross weight including body and payload:	
Cross country	10,400 lb
Highway	10,400 lb
Length, overall	326 in.
Width, overall	98 in.
Height, overall	60 in.
Lunette data:	
Height empty	36 in.
Height loaded	34 in.
Maximum ground clearance	17 in.
Departure angle	43°
Tread: center-to-center	67⅝ in.
Axle type: single Ord No. 8723952	
Spring type: semielliptical—Ord No. 8331871	
Size	2½ w x 46 lg
No. of leaves	9
Rate	600 lb/in.
Wheels, type, Ord No. 7389621:	
Single or duals	single
Tires:	
Size	9:00 x 20
Ply	8
Pressure:	
Highway	65 psi
Cross-country	35 psi
Sand	25 psi
Tread design	NDCC
Brakes, service Ord No. 8674210:	
Drum size	15 dia x 3
Actuation	air-hydraulic
Emergency relay valve	ORD No. 8330051
Air reservoir	ORD No. 7411078
Brakes, parking:	
Drum size	15 x 3
Actuation	manual
Effective slope	30 percent
Maximum towing speed:	
Cross-country	30 mph
Highway	50 mph
Electrical system Ord No. 8747330:	
Potential	24 volts
Tail lamps:	
Left hand	ORD No. 8378785
Right hand	ORD No. 8378786
Blackout lamps	ORD No. 7261917
Reflectors	ORD No. 506101, 506102

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-798

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

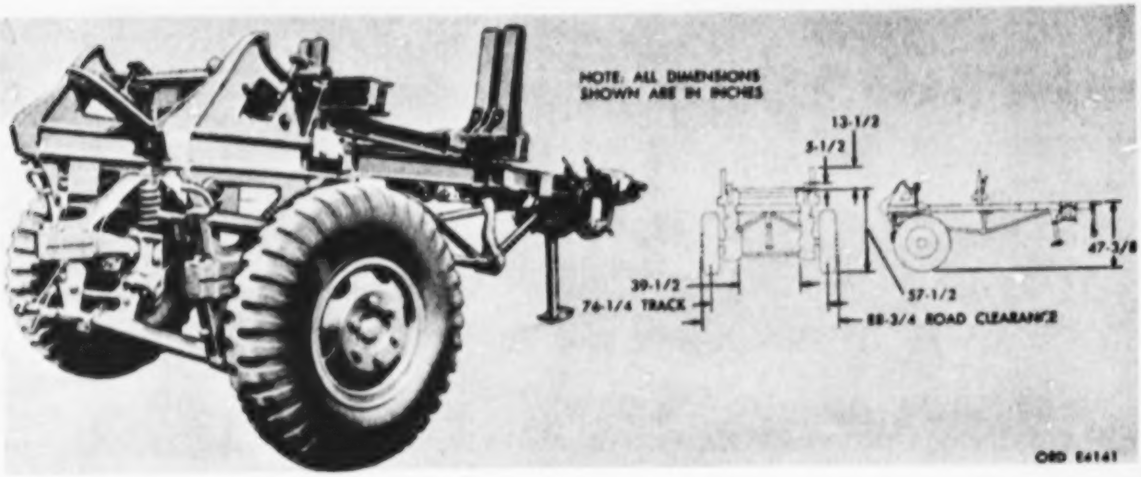
Shipped	
Length M143	336 in.
Length M143A1	326 in.
Width	95 in.
Volume	1075.4 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8206, SNL G-798.

TRAILER, CABLE REEL: 3½-TON, 2-WHEEL, M310 (SIGNAL CORPS MODEL K-37-B)



Major item

Model	*Line item No.*	*Federal stock No.*
M310		2330-395-1878

General

TRAILER, CABLE REEL: 3½-ton, 2-wheel, M310 (Signal Corps Model K37-B), is used by Signal Corps for construction and maintenance of telephone and telegraph pile lines and field lines. Trailer M310 has been designed for fording hard bottom water crossings where the trailer will be completely submerged.

The trailer has two different types of axles: a lower and two axle stubs. The trailer has air-over-hydraulic service brakes controlled from the towing vehicle and two parking brake levers.

Differences among models

Data plate location

The identification is located on a bracket at the outer side of tongue right channel.

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

Weight:	
Net	2,520 lb
Payload	7,000 lb
Gross	9,520 lb
Empty:	
Axle	2,175 lb
Lunette	345 lb
Loaded:	
Axle	9,146 lb
Lunette	380 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	
Cross country	
Sand	
Ground clearance	12 in.
Lunette height, empty	26 in.
Brakes:	
Manufacturer	Wagner
Type	air
Parking, type	mechanical

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-813.

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

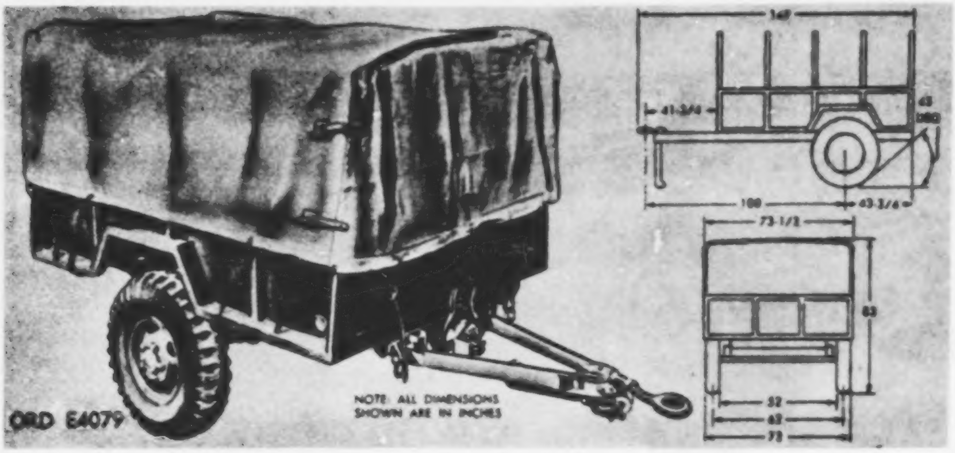
Shipped	
Length	149 in..
Width	88½ in.
Height	68¾ in.
Volume	525 cu ft
Area	92 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8236, SNL G-813.

TRAILER, CARGO: ¾-TON, 2-WHEEL, M101, W/E



Major item

Model	***Line item No.***	***Federal stock No.***
M101	4-57190-00	2330-738-9509

General

TRAILER, CARGO: ¾-ton, 2-wheel, M101, w/e, transports varied types of loads on highways and cross country. The tailgate is hinged to the body. Two handbrake levers at the front of the body and a drawbar assembly is attached to the front of the chassis. A retractable pivoted front support leg is attached to the drawbar bracket, and two taillights are mounted at the rear of the CHASSIS TRAILER: ¾-ton, 2-wheel M116* underneath the body of the trailer.

Differences among models

Data plate location

Identification plates (nameplate) are riveted to the front panel of the trailer body.

Classification: Standard B (OTCM 37839).

CHARACTERISTICS

Weight:	
Net	1,340 lb
Payload:	
Off highway	1,500 lb
On highway	2,250 lb
Gross:	
Off highway	2,840 lb
On highway	3,500 lb
Empty:	
Lunette	99 lb
Axle	1,241 lb
Loaded:	
Off highway:	
Lunette	172 lb
Axle	2,668 lb
On highway:	
Lunette	197 lb
Axle	3,393 lb
Tires:	
Size	9.00 x 16
Ply	8
Pressure:	
Highway	
Cross country	
Sand	
Ground clearance	14 in.
Loading height, empty	35 in.
Lunette height, w/body horizontal	21½ in.
Body inside dimensions:	
Length	96 in.
Width	66 in.
Height	50 in.
Cargo space	175 cu ft
Parking brake, type	mechanical

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-748.

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	147 in.
Width	73½ in.
Height	83 in.
Volume	520 cu ft
Area	74 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-874A, SNL G-748.

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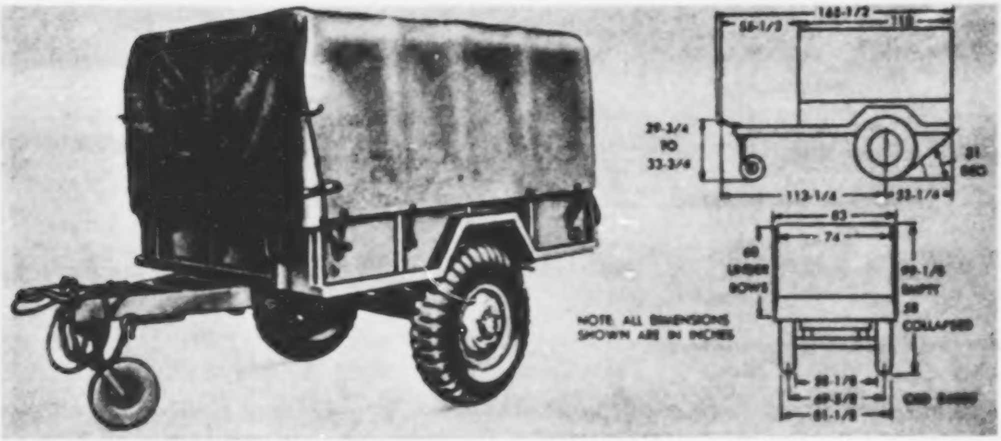
* For characteristics and data, see item on page 22-9.

TRAILER, CARGO: 1½-TON, 2-WHEEL, M104, M104A1, AND M104A2, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M104	4-57220-40	2330-734-0509
M104A1	4-57220-45	2330-835-8630
M104A2	4-57220-46	2330-679-0600

General

TRAILER, CARGO: 1½-ton, 2-wheel, M104, M104A1, and M104A2, w/e, provides transportation for general cargo. These trailers have been designed for fording hardbottom water crossings where the trailer will be completely submerged.

The trailer has a long-side body of welded plate construction. The wheel housing are welded integral with the body. The body has a front and a rear tailgate. They are hinged at the floor line and are latched in closed position by hooks of the welded tailgate chains.

Differences among models

Cargo trailer M104 uses CHASSIS, TRAILER: 1½-ton, 2-wheel, M102;* TRAILER, CARGO: 1½-ton, 2-wheel M104A1 uses CHASSIS, TRAILER: 1½-ton, 2 wheel, M102A1;* and TRAILER, CARGO: 1½-ton, 2-wheel, M104A2 uses CHASSIS, TRAILER: 1½-ton, 2-wheel M102A3.* The TRAILER, CARGO: 1½-ton, 2-wheel, M104A1 is the same as TRAILER, CARGO: 1½-ton, 2-wheel, M104 except that the M104A1 does not have a front tailgate; the body has gusset-type posts at sides and a tapered box type at the front and rear; the caster can be raised and locked in a mounting bracket which is welded to the nose of the chassis frame and has a locking handle.

Data plate location

Identification plates (nameplate) for trailer M104 and trailer M104A1 are located on the right side of the vehicle chassis frame.

Classification

M104	Standard B (OTCM 36841)
M104A1	Standard B (OTCM 36841)
M104A2	Standard B (OTCM 37119)

CHARACTERISTICS

Weight:	
Net:	
M104	2,400 lb
M104A1	2,730 lb
Payload:	
Off highway	3,000 lb
On highway	5,500 lb
Gross:	
M104:	
Off highway	5,400 lb
On highway	7,900 lb
M104A1:	
Off highway	5,730 lb
On highway	8,230 lb
Empty:	
M104:	
Lunette	160 lb
Axle	2,240 lb
M104A1:	
Lunette	225 lb
Axle	2,505 lb
Loaded:	
Off highway:	
M104:	
Lunette	295 lb
Axle	5,105 lb
M104A1:	
Lunette	360 lb
Axle	5,370 lb
On highway:	
M104:	
Lunette	407 lb
Axle	7,493 lb
M104A1:	
Lunette	473 lb
Axle	7,757 lb
Tires:	
Size	11.00 x 20
Ply	12
Pressure:	
Highway	50 psi
Cross country	35 psi
Sand	
Ground clearance	19½ in.
Loaded height, empty	35¾ in.
Body, inside dimensions:	
Length	110 in.
Width	74 in.
Height	60 in.
Cargo space	283 cu ft

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*For characteristics and data, see item on page 22-11.

CHARACTERISTICS—Continued

Brakes:	
Manufacturer	Timken-Detroit
Type	air-hydraulic
Parking brake, type	mechanical
Recommended towing speed:	
Off highway	35 mph
On highway	50 mph

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-754.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, CARGO: 2½-ton, 6 x 6*	M34 or similar

STORAGE AND SHIPMENT DATA

Within Continental United States

M104

Shipped	
Length	165½ in.
Width	88 in.
Height	99½ in.
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8226, SNL G-754.

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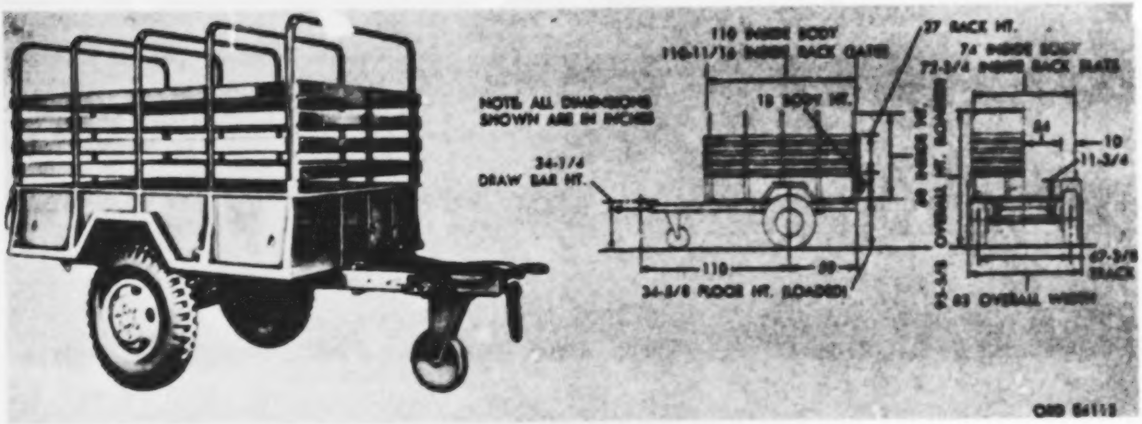
* For characteristics and data, see item in section 21

TRAILER, CARGO: 1½-TON, 2-WHEEL, M105, M105A1, AND M105A2


NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
110 INSIDE BODY
110-11/16 INSIDE RACK GATES
18 BODY HT.
27 RACK HT.
74 INSIDE BODY
73-3/4 INSIDE RACK SLATS
34-1/4 DRAW BAR HT.
110
58
34-5/8 FLOOR HT. (LOADED)
48 INSIDE HT.
OVERALL HT. (LOADED)
95-5/8
24
10
11-3/4
67-3/8 TRACK
83 OVERALL WIDTH

ORD 84115

Major item

Model	*Line item No.*	*Federal stock No.*
M105	4-57220-55	2330-277-9887
M105A1	4-57220-55	2330-835-8631
M105A2	4-57220-60	2330-141-8050

General

TRAILER, CARGO: 1½-ton, 2-wheel, M105, M105A1, and M150A2, is used to transport general cargo on and off highways.

The body is box type with lattice type side extensions, with tailgate, flat platform, fixed bed, and straight front. It is equipped with tarp bows and tarpaulin.

Differences among models

Except for less ample overall dimensions M105A1 is essentially the same as M105. The body construction of M105A2 is wood and steel as against all steel for the other models. The M105A2 is without support legs or jacks.

Data plate location

Instruction plate is located on the right side of the vehicle chassis frame.

Service plate is mounted on right of the chassis frame, just to the rear of the instruction plate.

Classification

M105	Standard B (OTCM 36841)
M105A1	Standard B (OTCM 36841)
M105A2	Standard A (OTCM 37119)

CHARACTERISTICS

Weight:	
Net	2,650 lb
Payload:	
Off highway	3,000 lb
On highway	4,500 lb
Gross:	
Off highway	5,650 lb
On highway	7,150 lb
Lunette w/payload	360 lb
Axle w/payload	5,290 lb
Landing gear w/payload	480 lb
Axle w/payload	5,170 lb
Tires:	
Ply	8
Size	9.00 x 20
Number	2
Pressure:	
Highway	45 psi
Cross-country	45 psi
Sand	45 psi
Ground clearance	10½ in.
Electrical system	24 volts
Brakes:	
Drum size	15 in.
Type	air/hydraulic
Parking brake	mechanical
Dimensions:	
Overall length:	
M105	182 in.
M105A1 and M105A2	166 in.
Overall width:	
M105	96 in.
M105A1 and M105A2	83 in.
Height:	
M105 and M105A2	
M105A1	96 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-754, Sec. 1.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, CARGO: 2½-ton, 6 x 6.*

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	430 cu ft
Area	95.5 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-754, TM 9-8226.

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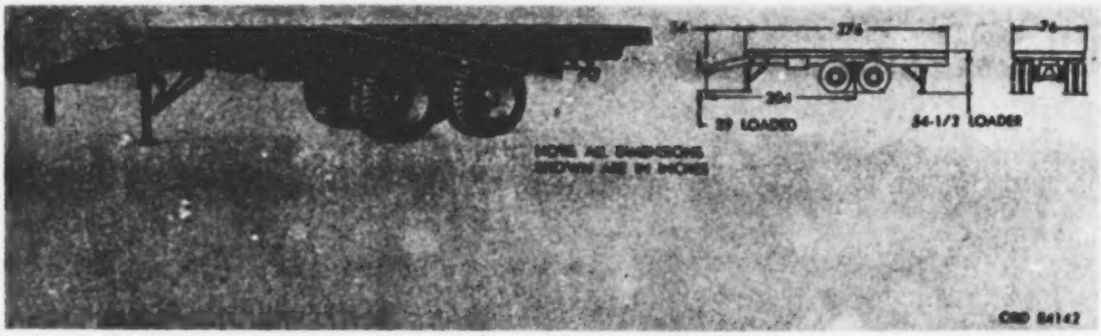
* For characteristics and data, see item in section 21.

TRAILER, FLATBED: 10-TON, 4-WHEEL, M345



Major item

Model	*Line item No.*	*Federal stock No.*
M345		2330-200-1737

General

TRAILER, FLATBED: 10-ton, 4-wheel, M345 transports heavy duty equipment over surfaced roads and cross-country.

Towing facilities on the trailer enable it to be towed by any vehicle of sufficient tonnage equipped with a pintle hook and air supply.

The trailer is designed to ford hard bottom water crossings to the depth which is capable of being forded by the towing vehicle.

The trailer frame is constructed of structural and pressed steel.

The front and rear axles, spring assembly, and axle trunnion form a tandem unit.

The flatbed trailer has an air-over-hydraulic brake system controlled from the towing vehicle.

Chock blocks are provided to keep the vehicle from rolling when parked. These blocks are chained to the vehicle to prevent loss. When not in use they are carried in brackets welded above the spring saddle, one on each side of the vehicle.

***Caution:* This vehicle exceeds the dimension limitation in regard to vehicle width by 2 inches to those permitted under AR 700–2300–1. Advance planning will be required in the selection of routes because of clearances involved.**

Differences among models

Data plate location

The identification plate is located on the right side of the trailer front sill.

Classification: Standard A (OTCM 36876).

CHARACTERISTICS

Type	flat platform bed
Curbweight	11,260
Weight:	
Empty:	
Lunette eye	829 lb
Axle	10,431 lb
Cross-country:	
Lunette eye	1,828 lb
Axle	29,432 lb
Highway:	
Lunette eye	2,128 lb
Axle	35,132 lb
Gross (including body and payload):	
Cross-country	31,260 lb
Highway	37,260 lb
Lunette data, height (empty)	29 in.
Landing gear:	
Manufacturer	Homan & Co., Inc.
Type	swing-mounted-adjustable, front and rear
Axle:	
Type	tandem
Manufacturer	Visioneering Co.
Tubular diameter	5½ in.
Spring:	
Type	semielliptical (ORD No. 8733785)
Size	59½ 1 x 5 w
No. of leaves	13
Auxiliary springs	none
Shock absorbers type	none
Wheels:	
Type	offset disk, w/removable split retaining rings
Single or duals	duals
Tires:	
Size	11.00 x 20
Ply	12
Tread design (Military)	NDCC
Pressure:	
Highway	50 psi
Cross-country	35 psi
Sand, snow, and mud	15 psi
Tread:	
Center-to-center	72 in.
Outer	96¾ in.
Brakes, service:	
Manufacturer	Wagner Electric
Type	two-shoe expanding
Drum size	16.485 dia x 5½ wide
Actuation	air-over-hydraulic
Emergency relay valve	1
Air reservoir	1
Parking brake	chock blocks only
Maximum towing speed:	
Cross-country	30 mph
Highway	55 mph
Electrical system, potential	24 volts

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

PRIME MOVER

Any vehicle of sufficient tonnage equipped with a pintle hook and air supply.

STORAGE AND SHIPMENT DATA

Within Continental United States

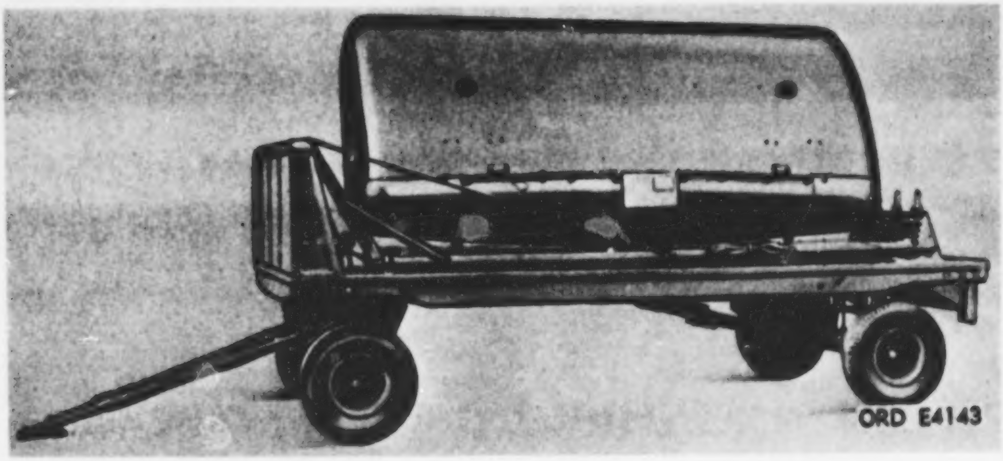
Shipped	
Length	27 ft 9 in.
Width	4 ft 2 in.
Height	8 ft 6½ in.
Volume	1,065 cu ft
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-8242, SNL G816.

TRAILER, FLATBED: FIRE CONTROL/ACQUISITION RADAR, 2-TON, 4-WHEEL, M243



Major item

Model	*Line item No.*	*Federal stock No.*
M243	4-57865-00	2330-835-8625

General

The TRAILER, FLATBED: fire control/acquisition radar, 2-ton, 4-wheel, M243 is used to transport the acquisition radar antenna. It has four single wheels and a pivoting front dolly assembly. A triangular drawbar attached to the front dolly is used to connect the trailer to the towing vehicle. Two types of service brake systems are found on these trailers, early models are equipped with electric brake systems, later models have air-over-hydraulic systems.

The trailer is equipped with DOLLY, TRAILER, FRONT: M481* and DOLLY, TRAILER, REAR M482.*

Difference among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length	236 in.
Width	96 in.
Height	84⅛ in.
Wheel base	172¼ in.
Weight (gross)	5,548 lb
Weight (net)	3,985 lb
Tread, center-to-center	60 in.
Tires:	
Ply	8
Size	9.00 x 16
Number	4
Pressure:	
Highway	
Cross-country	
Sand	
Ground clearance	14¼ in.
Loading height	45⅝ in.
Lunette height (adjustable)	27 in.
Pintle height	none

Fifth wheel:	
Height	30½ in.
Size	38 in.
Type	kingpin w/drawbar
Brakes:	
Type	6-volt electric or air-over-hydraulic
Manufacturer—electric brakes	Warner
Parking	hand operated

PRIME MOVER

TRUCK, CARGO: 2½-ton, 6 x 6.**

PERFORMANCE

Recommended towing speed (max):	
Off highway	15 mph
On highway	50 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	1,100 cu ft
Area	204 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-212-24P and TM 9-2330-212-14

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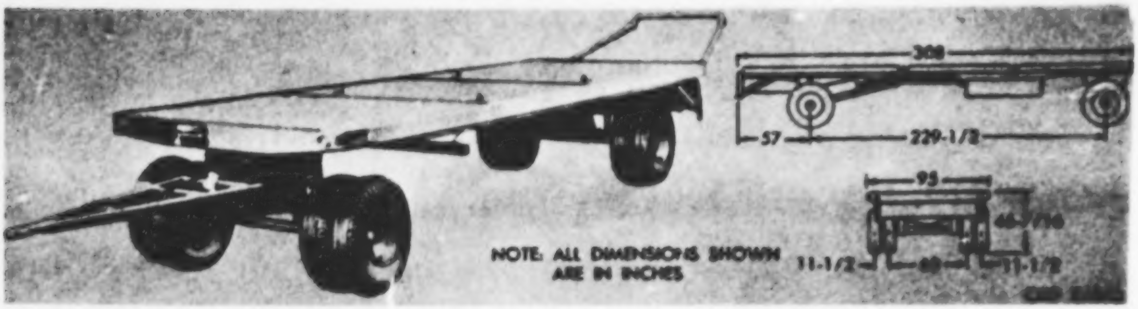
* For characteristics and data, see item on pages 22-22 and 22-23.

** For characteristics and data, see item in section 21.

TRAILER, FLATBED: GUIDED MISSILE, M261 AND M261A1, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M261	4-57372-10	2330-835-8637
M261A1	4-57372-20	2330-346-7563

General

TRAILER, FLAT BED: guided missile, M261, and M261A1, w/e, transports the missile and the booster. Trailer is not to be used for general or miscellaneous hauling.

The trailer has a pivoting front dolly assembly and fixed rear dolly assembly. A triangular drawbar attached to the front dolly is used to connect the trailer to the towing vehicle.

A mechanical parking brake is located in the A-frame of the rear dolly and is used to actuate the brakes when the trailer is emplaced or at-the-halt.

The flatbed trailers M261 and M261A1 have a hydraulic bed leveling system used to lower and maintain the height of the trailer bed floor so that it will be level with the rails of the loading rack.

Differences among models

Trailer M261 is equipped with DOLLY, TRAILER, FRONT: M429H* and DOLLY TRAILER, REAR: M430H.* Trailer M261A1 is equipped with DOLLY, TRAILER, FRONT: M429A1H* and DOLLY, TRAILER, REAR: M430A1H.* Trailer M461 uses electric service brakes while trailer M261A1 uses air-hydraulic service brakes.

Data plate location

Classification: Standard B (OTCM 36876).

CHARACTERISTICS

Weight:	
Net	7,694 lb
Payload	3,245 lb
Gross	10,939 lb
Tires:	
Size	9.00 x 16
Ply	8
Pressure:	
Highway	
Cross country	
Sand	
Ground clearance	14¾ in.
Loading height	46⅞ in.
Tread, center-to-center (front)	73 in.
Fifth wheel:	
Size	42 in.
Type	cone
Brakes:	
Manufacturer	Wagner Electric Brake Mfg. Co.
Type	electric
Parking brake, type	hand-operated, electric

Towing vehicle	TRUCK, CARGO: 2½-ton, 6 x 6
Recommended towing speed (max):	
Off highway	15 mph
On highway	50 mph

PERFORMANCE

EQUIPMENT

Basic Issue Items. See TM 9-2330-212-14.

Special:

Extension ramps:

Vehicle equipped with two telescoping-type extension ramps. When the ramps are emplaced between the trailer and the loading racks, the launching and transporting rail (with or without the missile and booster) can be rolled off the trailer across the extension ramps, and onto the loading rack.

Missile hoist beam:

This hoist beam, when attached to mobile crane, is used to lift missile from transporting rail and place it on universal-handling dolly for draining of the fuel and oxidiser tank.

Handling-ring segments:

Each trailer is equipped with eight handling ring segments that, when assembled, form two complete rings by which the missile is handled.

Universal-handling dolly:

The purpose of this dolly is to hold the missile for emergency draining of fuel or oxidiser tank.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	308 in.
Width	95 in.
Height	46⅛ in.
Volume	780 cu ft
Area	203 sq ft
Gross Weight	6,780 lb
Ship tons	19.67

Outside Continental United States

Shipped	
Length	308 in.
Width	95 in.
Height	46⅛ in.
Volume	780 cu ft
Area	203 sq ft
Gross Weight	6,780 lb
Ship tons	19.67

References: TM 9-2330-212-14, SNL G-789.

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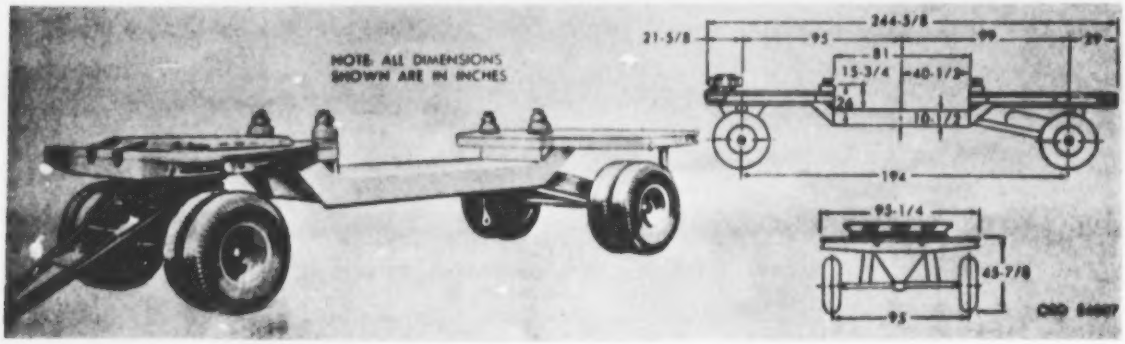
* For characteristics and data, see item on pages 22-20 and 22-21.

TRAILER, LOW-BED: ANTENNA MOUNTED, M260 AND M260A1, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M260	4-87250-10	2330-835-8636
M260A1	4-87250-20	2330-046-7820

General

TRAILER, LOW-BED: antenna mount, M260 and M260A1, w/e, is used to accommodate and transport target tracking radar equipment. The trailer consists of a pivoting front dolly assembly, fixed rear dolly assembly, a drop-bed type body, dual-wheel assemblies, brakes, electrical system, bumper group, and wheel chocks.

Differences among models

Trailer M260 is equipped with DOLLY TRAILER, FRONT: M429G* and DOLLY, TRAILER, REAR: M430G.* Trailer M260A1 is equipped with DOLLY, TRAILER, FRONT: M429A1G* and DOLLY, TRAILER, REAR: M430A1G.

Data plate location

The identification plate is located to the right of the bumper group on the rear platform.

Classification: Standard B (OTCM35841).

CHARACTERISTICS

Weight:	
Net	5,156 lb
Payload	4,750 lb
Gross	9,906 lb
Ground clearance	14¼ in.
Loading height	45⅞ in.
Lunette height (adjustable)	27⅜ in.
Pintle height	none
Fifth wheel:	
Height	39¼ in.
Size	38 in.
Type	kingpin with drawbar
Brakes:	
Manufacturer	Warner Electric Brake Mfg Co.
Type	electric
Parking, type	hand-operated, electric

Towing facilities	lunette and drawbar
Towing vehicle	truck, 2½-ton, 6 x 6
Tires:	
Size	9.00 x 16
Ply	8
Pressure	32 psi
Tread, center-to-center	60 in.

PERFORMANCE

Towing speed:	
Off highway	15 mph
On highway	50 mph

EQUIPMENT

Basic Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	uncrated
Length	
Width	
Height	
Volume	650 cu ft
Area	224 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-212-14.

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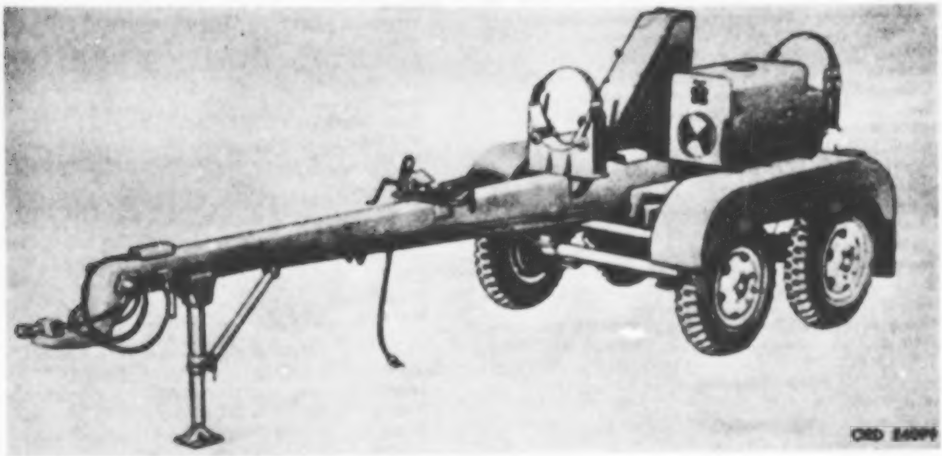
* For characteristics and data, see item on pages 22-20 and 22-21.

TRAILER, ROCKET TRANSPORTER: 762-MM ROCKET, M329 AND M329A1, W/E



Major item

Model	*Line item No.*	*Federal stock No.*
M329	4-17525-06	2330-040-1733
M329A1	4-17525-05	2330-508-1483

General

TRAILER, ROCKET TRANSPORTER: 762-mm rocket, M329 and and M329A1, w/e, is a 4-wheel vehicle designed to transport the 762-mm rocket from the assembly area to the launching site and serve as an assembly platform for the rocket. Basically each of the two trailers consists of a frame and reach assembly, a tandem suspension assembly, "air-over-hydraulic" service brakes, parking brakes (rear axle only), four wheels, a landing jack assembly, a lighting system, an auxiliary electrical system, and a front, center, and rear saddle assembly onto which the rocket is loaded.

Each model of the vehicle has been designed for fording hard-bottom water crossings where the trailer will be completely submerged. Deep-water fording information on the generator set is not currently available.

Differences among models

In addition to the "General" description, the trailer M329A1 has a rocket fin storage hood, a spare tire and a tire carrier assembly, and an attachable taillight receptacle.

Data plate location

The identification plate (nameplate) for Model M329, is located on the rear of the frame on the left side adjacent to the left taillight.

The identification plate (nameplate) for Model M329A1, is located on the forward right side of the reach.

Classification

M329 —Standard B (OTCM 37119).
M329A1—Standard B (OTCM 36876).

CHARACTERISTICS

M329:

Type	frame and reach assembly
Curbweight	5,000 lb
Weight, including body and payload (gross):	
Cross-country	11,000 lb
Highway	11,000 lb
Height, overall (empty)	78⅛ in.
Length, overall	301⅝ in.
Width, overall	96 in.
Landing jack, type	hinged screw, adjustable, retracting crank
Axle type	tubular, Timken design
Spring type	semielliptical
No. of leaves	10
Wheels:	
Type	divided rim or offset disk
Single or duals	single
Tires:	
Size	9:00 x 20
Ply	10
Tread design	NDCC
Pressure:	
Highway	
Cross-country	
Sand	
Tread, center-to-center of tires	80 in.
Brakes, service:	
Manufacturer	Timken
Drum size	15 dia x 3 w
Actuation	air-over-hydraulic
Parking:	
Manufacturer	Fruehauf
Drum size	15 dia x 3 w
Actuation	hand-operated
Mounting	rear axle only
Electrical system, potential	24 volts
Gasoline engine and generator set—M25:	
Make	ONAN
Models:	
Old	305ACK-99E/557B
New	305ACK-99E/1056C

M329A1:

Type	frame and reach assembly
Curbweight	6,000 lb
Weight, including body and payload (gross):	
Cross-country	12,000 lb
Highway	12,000 lb
Height, overall (empty)	84 in.
Length, overall	320 in.
Width, overall	96 in.
Tread, center-to-center of tires	80 in.
Landing jack, type	hinged screw, adjustable, retracting crank
Axle type	Tubular, Ordnance Standard, 10,000 lb
Spring type	semielliptical
No. of leaves	10
Wheels:	
Type	offset disk
Single or duals	single

CHARACTERISTICS—Continued

M329A1—Continued

Tires:	
Size	9:00 x 20
Ply	10
Tread design	NDCC
Pressure:	
Highway	
Cross-country	
Sand	
Service brakes, Wagner Electric Corp.:	
Drum size	15 x 3¹¹⁄₁₆
Actuation	air-over-hydraulic
Parking brakes, Fruehauf:	
Drum size	15 dia x 3¹¹⁄₁₆ w
Actuation	band operated
Electrical system potential	24 volts
Gasoline engine and generator set—M25:	
Make	ONAN
Models:	
Old	305ACK/99E/557B
New	305ACK/99E/1056C

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-821.

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

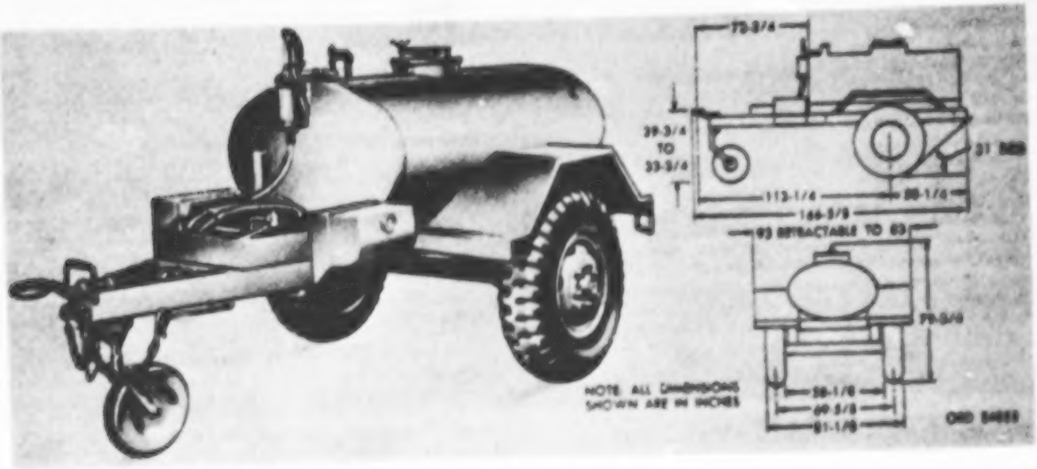
M329:	
Shipped	
Length	25 ft, 1⅝ in.
Width	8 ft
Height	6 ft, 9⅛ in.
Volume	131.3 cu ft
Area	200 sq ft
Gross weight	
Ship tons	
M329A1:	
Shipped	
Length	26 ft, 8 in.
Width	8 ft
Height	7 ft, 3 in.
Volume	1,493 cu ft
Area	213.3 sq ft
Gross Weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-223-15, SNL G-821.

TRAILER, TANK: WATER, 1½-TON, 2-WHEEL, 400-GAL, M106, M106A1, AND M106A2



Major item

Model	*Line item No.*	*Federal stock No.*
M106	4-57495-20	2330-784-0508
M106A1	4-57495-25	2330-835-8632
M106A2	4-57495-26	2330-679-0608

General

TRAILER, TANK: water, 1½-ton, 2-wheel, 400 gal, M106, M106A1, and M106A2, is used to transport, store, and dispense drinking water.

Each trailer is designed to be towed over prepared roads with loads of 5,800 pounds and to be towed over unimproved roads, trails, and open rolling terrain with loads to 5,000 pounds at speeds as great as 50 mph.

Each trailer has been designed for fording hard-bottom water crossings where the trailer will be completely submerged, and to be towed by TRUCK, CARGO: 2½-ton, 6 x 6, M34* or similar vehicle.

Each trailer is equipped with a 400-gallon capacity aluminum water tank of elliptical cross section.

Two fenders, one on each side, are provided with extensions in front and rear. The fenders and extensions have nonslip horizontal surfaces.

Differences among models

M106 can be used only with a towing vehicle having an air supply, such as the M34.

M106 is equipped with hand water pump and 25-foot suction hose for filling.

M106 has a wood-slat-floored extension at the front of the tank for storing a bell strainer with hose. The extension is flanked on either side by a welded metal faucet box.

On M106A1 a piping cover plate is located over the piping between the two welded metal faucet boxes at the front of the tank.

Front caster on Model 106 is not interchangeable with front caster on M106A1 and M106A2. Caster wheel with bearings is interchangeable. M106A1 and M106A2 caster is raised and locked in a mounting bracket welded to nose of chassis frame and has locking handle.

The support leg is standard equipment on the M106 only.

M106A2 employs two hydraulic wheel cylinders for each wheel service brake.

The M106 lunette is mounted into the boss welded to the nose of the chassis frame.

The M106A1 lunette is mounted into a casting welded to the nose of the chassis frame.

Data plate location

Instruction plate is located on the right side of the vehicle chassis frame.

Service plate is mounted on right side of the chassis frame, just to the rear of instruction plate.

Classification

M106	Standard B (OTCM 36841)
M106A1	Standard B (OTCM 36876)
M106A2	Standard B (OTCM 36876)

CHARACTERISTICS

Weight:	
Net	M106, 2,280; M106A1, 2,800 lb
Gross including body and payload:	
M106:	
Off highway	5,615 lb
On highway	5,615 lb
M106A1:	
Off highway	5,695 lb
On highway	5,695 lb
Length	168 in.
Width	88 in.
Height	80 in.
Ground clearance	19¼ in.
Tires:	
Ply	12
Size	11.00 x 20
Number	2
Pressure:	
Highway	50 lb
Cross-country	35 lb
Sand	
Ground clearance	19¼ in.
Capacity	400 gal
Brakes:	
Type	air-hydraulic
Parking brake, type	mechanical
Electrical system: Potential	24 volts

PERFORMANCE

Fording depth—complete submergence

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-754, Sec. 1.

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see item in section 21

STORAGE AND SHIPMENT DATA

Within Continental United States

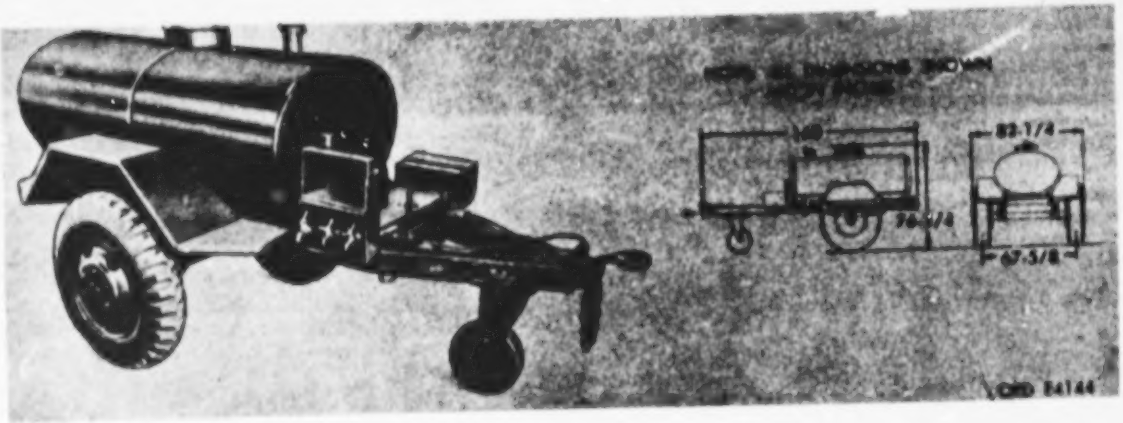
Shipped
Length...
Width..
Height...
Volume...
Area...
Gross weight...
Ship tons..

Outside Continental United States

Shipped
Length...
Width..
Height...
Volume...
Area...
Gross weight...
Ship tons..

References: SNL G-734, TM 9-8226.

TRAILER, TANK: WATER, 1½-TON, 2-WHEEL, 400 GAL, M107, M107A1, AND M107A2



	Major item	
Model	*Line item No.*	*Federal stock No.*
M107	4-57495-30	2330-835-8540
M107A1	4-57495-35	2330-835-8633
M107A2	4-57495-40	2330-141-8049

General

TRAILER, TANK: water, 1½-ton, 2-wheel, 400 gal, M107, M107A1, and M107A2, is used to transport, store, and dispense drinking water.

Each trailer is designed to be towed over prepared roads with loads of 5,500 pounds at speeds as high as 50 mph and to be towed over unimproved roads, trails, and open rolling terrain with loads to 3,000 pounds at speeds as high as 30 mph. Each trailer has been designed for fording hard bottom water crossings, where the trailer will be completely submerged, and to be towed by a TRUCK, CARGO: 2½-ton, 6 x 6, M34* or similar vehicle.

Each trailer is equipped with a 400-gallon capacity aluminum water tank of elliptical cross section

Two fenders, one on each side are provided with extensions in front and rear. The fenders and extensions have nonslip horizontal surfaces.

Differences among models

M107 can be used only with a towing vehicle having an air supply, such as the TRUCK, CARGO: 2½-ton, 6 x 6, M34.

M107 is equipped with hand water pump and 25-foot suction hose for filling.

M107 has a wood-slat-floored extension at the front of the tank for storing a bell strainer with hose. The extension is flanked on either side by a welded metal faucet box.

On M107A1 and M107A2, a piping cover plate is located over the piping between the two welded metal faucet boxes at the front of the tank.

Front caster on M107 is not interchangeable with front caster on M107A1 and M107A2. Caster wheel with bearings is interchangeable. M107A1 and M107A2 caster is raised and locked in a mounting bracket welded to nose of chassis frame and has locking handle.

The support leg is standard equipment on M107 only.

The M107 lunette is mounted into the boss welded to the nose of the chassis frame.

The M107A1 and M107A2 lunette is mounted into a casting welded to the nose of the chassis frame.

M107A2 employs two hydraulic wheel cylinders for each wheel service brake.

Data plate location

Instruction plate is located on the right side of the vehicle chassis frame.

Service plate is mounted on right of the chassis frame, just to the rear of the instruction plate.

Classification

M107	Standard B (OTCM 36841)
M107A1	Standard B (OTCM 36876)
M107A2	Standard B (OTCM 37119)

CHARACTERISTICS

Weight:	
Net:	
M107	2,280 lb
M107A1	2,280 lb
M107A2	
Gross including body and payload:	
M107:	
Off highway	5,615 lb
On highway	5,615 lb
M107A1:	
Off highway	
On highway	
M107A2:	
Off highway	
On highway	
Length:	
M107	170 in.
M107A1	163 in.
M107A2	
Width:	
M107	88 in.
M107A1	82 in.
M107A2	
Height:	
M107	75 in.
M107A1	77 in.
M107A2	
Ground clearance	16½ in.
Tires:	
Ply	8
Size	9.00 x 20
Number	2
Pressure:	
Highway	
Cross-country	
Sand	
Towing speed (recommended):	
Off highway	15 mph
On highway	55 mph
Electrical system:	
Potential	24 volts

---

* For characteristics and data, see item in section 21.

CHARACTERISTICS—Continued

Brakes:
  Service, type........air-hydraulic
  Parking brake, type........mechanical
Capacity........400 gal

PERFORMANCE

Fording depth—complete submergence.

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-754, Sec. 1.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

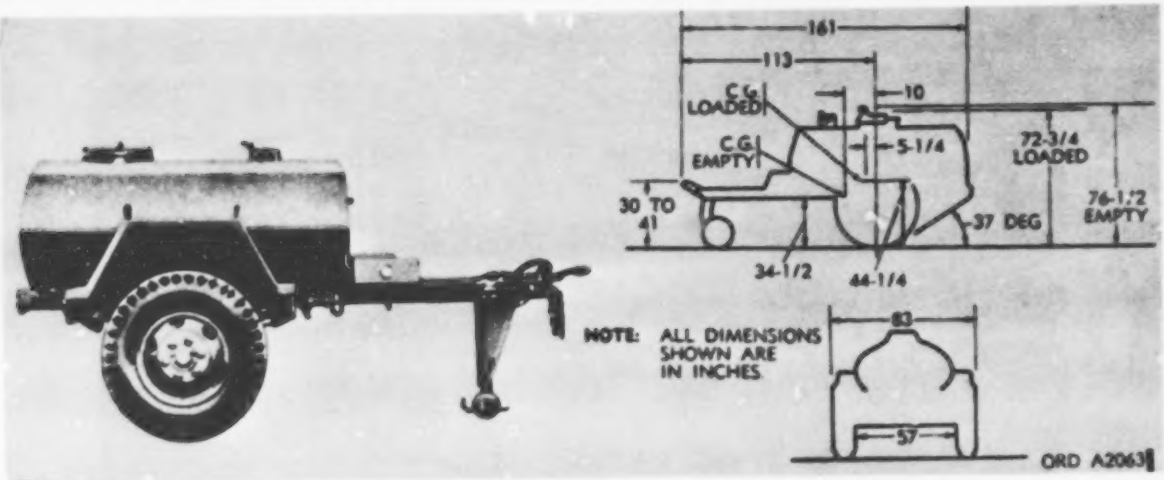
Shipped
  Length........
  Width........
  Height........
  Volume........897 cu ft
  Area........98¼ sq ft
  Gross weight........
  Ship tons........18

Outside Continental United States

Shipped
  Length........
  Width........
  Height........
  Volume........
  Area........
  Gross weight........
  Ship tons........

References: TM 9-8226, SNL G-754.

TRAILER, TANK: water, 1½-TON, 2-WHEEL, 400 GAL., M149, W/E



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Model	*Line item No.*	*Federal stock No.*
M149, w/e	4-5749-05	2330-542-2039

General

TRAILER, TANK: water, 400-gal., 1½-ton, 2-wheel, M149 is used to transport, store, and dispense drinking water.

Differences among models

Data plate location

The data plates are attached to the right front side of the "A" frame extension.

Classification: Standard A (OTCM 36934).

CHARACTERISTICS

Weight:	
Net	
Gross including body and payload	
Length	161 in.
Width	82⅛ in.
Height:	
Empty	76½ in.
Loaded	72¾ in.
Lunette height	30 to 41 in.
Tread, center to center	67⅝ in.
Ground clearance	17 in.
Angle of approach	
Angle of departure	37 deg
Springs:	
Type	semi-elliptical laminated leaf
Length (free)	53 in.
Number of leaves	8
Width of leaves	3½ in.
Wheels:	
Manufacturer	Budd Co.
Type	Military offset disk
Rim size	20 x 7.5
Tire retention	split-type retaining side ring
Tires:	
Type	pneumatic combat
Ply	8
Size	9.00 x 20
Pressure:	
Highway	
Cross-country	
Sand	

Brakes:	
Manufacturer	Wagner Electric Co.
Type	air-over-hydraulic
Parking type	mechanical
Electrical system	24 volt

PERFORMANCE

Maximum towed speed:	
Highway	
Cross-country	

EQUIPMENT

Basic Issue Items: See TM 9-2330-267-14P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

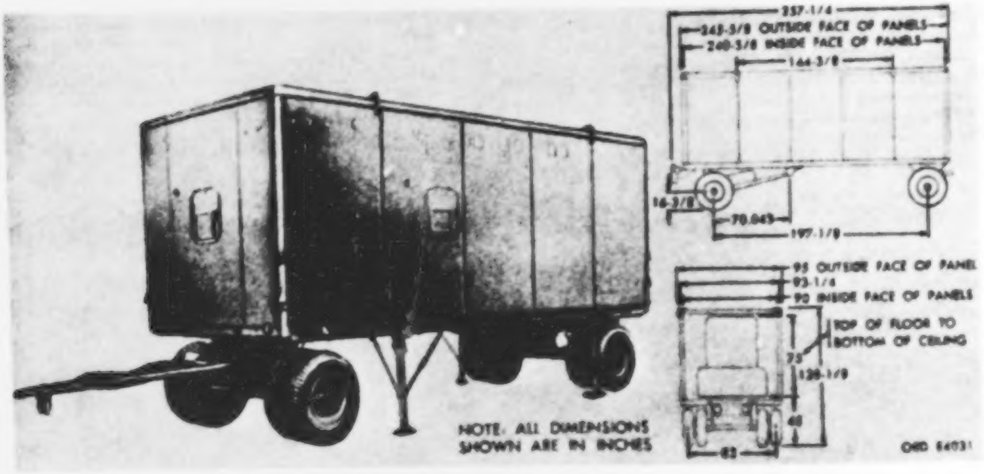
Shipped 1 trailer	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 trailer	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-267-14P.

TRAILER, VAN: DIRECTOR STATION, M259, M259A1, M259A1C, AND M259C



Major item

Model	*Line item No.*	*Federal stock No.*
M259		2330-835-8635
M259A1		2330-046-7814
M259A1C		2330-705-8945
M259C		2330-705-8944

General

TRAILER, VAN: director station, M259, M259A1, M259A1C, and M259C, is used to house a computer, a telephone, the battery control console, and plotting and recording equipment.

Each trailer is designed to be towed by a TRUCK, CARGO: 2½-ton 6 x 6.*

The body is made up of magnesium panels with paper honeycomb core.

It has one door in the rear and a tailgate.

Trailer is provided with gasoline personnel heater and ducts.

Power is supplied to the chassis lighting system and electric brake system by the generator on towing vehicle.

Four manually operated jacks are provided with each trailer, hinged to underside of chassis.

Differences among models

M259 requires a prime mover equipped with an electric brake controller to operate the trailer brakes.

M259A1 requires a prime mover equipped with an air brake controller for operating the trailer brakes and the proper connection for attaching the trailer.

DOLLY, TRAILER, FRONT: M429F** and DOLLY, TRAILER, REAR: M430F** used on M259 trailer.

DOLLY, TRAILER, FRONT: M429A1F** and DOLLY, TRAILER, REAR: M430A1F** used on M259A1 trailer.

Data plate location

Identification plate (nameplate) is located in the rear above floor level at the right corner of van body.

Instruction and caution plates are located at pertinent points.

Classification

M259	Standard B (OTCM 36876)
M259A1	Standard B (OTCM 36876)
M259A1C	Standard B (OTCM 36876)
M259C	Standard B (OTCM 36841)

CHARACTERISTICS

Weight:	
W/director	gross 12,615 lb
W/o director	net 6,860 lb
Tires:	
Ply	8
Size	9.00 x 16
Number	6
Pressure:	
Highway	
Cross-country	
Sand	
Length	245⅝ in.
Width	95 in.
Height	128⅛ in.
Ground clearance	14⅜ in.
Loading height	45 in.
Drawbar height (adjustable)	27 in.
Components:	
Brakes (trailer M259)	electric 6 volts
Brakes (trailer M259A1)	air-overhyd
Brakes (trailer M259A1C)	
Brakes (trailer M259C)	
Lights (clearance and stop)	24 volts
Lights (equipment, operating)	120 volts
Fifth wheel:	
Size	38⅝ in.
Type	kingpin w/drawbar
Height	39⅛ in.
Heater, personnel (Hunter):	
B.t.u	60,000
Towing facility	drawbar
Recommended towing speed (max):	
Off highway	15 mph
On highway	50 mph

PERFORMANCE

EQUIPMENT

Basic-Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see item in section 21.

** For characteristics and data, see items on pages 22-20 and 22-21.

STORAGE AND SHIPMENT DATA

Within Continental United States

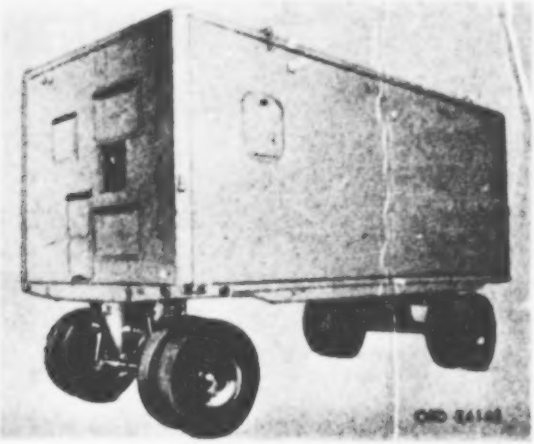
Shipped	
Length	
Width	
Height	
Volume	1,794 cu ft
Area	218 sq ft
Gross weight	
Ship tons	45 tons

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-212-14, TM 9-2330-212-24P.

TRAILER, VAN: ELECTRONIC SHOP, 2½-TON, 4-WHEEL, M359 AND M359A1



Major item

Model	*Line item No.*	*Federal stock No.*
M359		2330-046-1734
M359A1		2330-046-3984

General

TRAILER, VAN: electronic shop, 2½-ton, 4-wheel, M359 and M359A1, is used to transport and house electronic equipment for guided missile system.

Each trailer is designed to be towed by a TRUCK, CARGO: 2½-ton 6 x 6.*

The body is made up of magnesium panels with paper honeycomb core.

There is a door in the rear and a tailgate.

Trailer is provided with gasoline personnel heater and ducts.

Power is supplied to the chassis lighting system and electric brake system by the generator on towing vehicle.

Four manually operated jacks are provided with each trailer, hinged to underside of chassis.

Differences among models

On M359 electric brakes are employed (6 volt).

On M359A1 air-over-hydraulic brakes are used.

M359 is equipped for DOLLY, TRAILER, FRONT: M429N* and DOLLY, TRAILER, REAR: M430N.*

M359A1 is equipped for DOLLY, TRAILER, FRONT: M429A1N* and DOLLY, TRAILER, REAR: M430A1N.*

Brakes, service:	
Actuation:	
M359	electric
M359A1	air-over-hydraulic
Emergency relay valve:	
M359	none
M329A1	1
Air reservoir:	
M359	none
M359A1	1

Data plate location

Instruction and caution plates are located at pertinent points.

Identification is stamped into frame in ⅝-inch high letters in the rear at the right side.

Classification: Standard B (OTCM 36876).

CHARACTERISTICS

Tires:	
Ply	
Size (heavy duty)	9.00 x 16
Number	8
Tread design	NDCC
Pressure:	
Highway	
Cross-country	
Sand	
Minimum ground clearance:	
Front dolly	17 in.
Rear dolly	16 in.
Fording depth	same as towing vehicle
Tread:	
Inner	60 in.
Outer	81 in.
Wheels, type	dual
Parking brake:	
Actuation	handlever-manual
Mounting	rear dolly
Lights (clearance and stop)	24 volts
Lights (equipment, operating)	120 volts
Towing facilities	drawbar

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per
Length	225 in.
Width	95 in.
Height	126 in.
Volume	1,622 cu ft
Area	148.4 sq ft
Gross weight	11,989 lb
Ship tons	41

Outside Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-2 12-14, TM 9-2330-212-24P.

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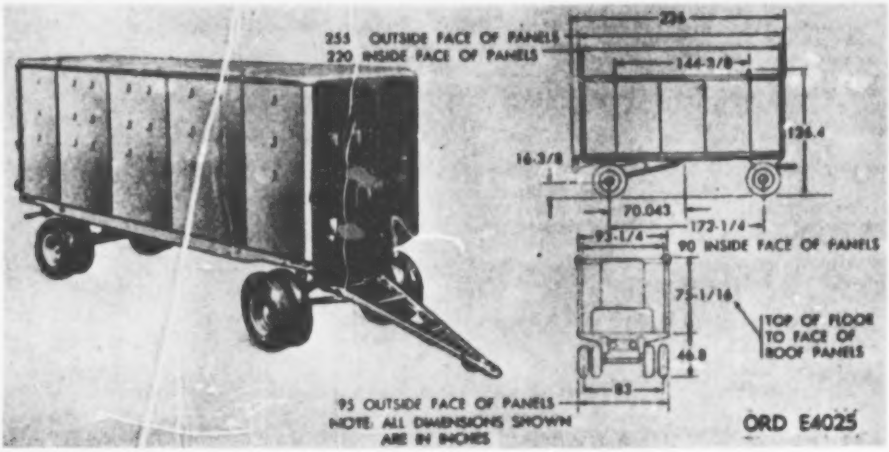
* For characteristics and data, see items in section 21 and on pages 22-20 and 22-21.

TRAILER, VAN: FIRE CONTROL, 2-TON, 4-WHEEL, M244 AND M244A1



255 OUTSIDE FACE OF PANELS
220 INSIDE FACE OF PANELS
226
144-3/8
126.4
16-3/8
70.043
172-1/4
93-1/4
90 INSIDE FACE OF PANELS
75-1/16
TOP OF FLOOR TO FACE OF ROOF PANELS
46.8
83
95 OUTSIDE FACE OF PANELS
NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES
ORD E4025

Major item

Model	*Line item No.*	*Federal stock No.*
M244		2330-835-8626
M244A1		2330-335-7500

General

TRAILER, VAN: fire control, 2-ton, 4-wheel, M244 and M244A1, is used to transport components of the acquisition antenna assembly and spare parts and to serve as a work space for the FIRE CONTROL SYSTEM, ANTIAIRCRAFT: M33C.

Each trailer is designed to be towed by a TRUCK CARGO: 2½-ton 6 x 6.*

The body is made up of magnesium panels with paper honeycomb core.

There is a door in the rear and a tailgate.

Trailer is provided with gasoline personnel heater and ducts.

Power is supplied to the chassis lighting system and electric brake system by the generator on towing vehicle.

Four manually operated jacks are provided with each trailer, hinged to underside of chassis.

Differences among models

On M244 electric brakes are employed.

On M244A1 air-hydraulic brakes are employed.

Parking brakes are manual on M244A1 and electric on M244.

M244 is equipped for DOLLY, TRAILER, FRONT, M429C* and DOLLY, TRAILER, REAR, M430C.*

M244A1 is equipped for DOLLY, TRAILER, FRONT, M429A1C* and DOLLY, TRAILER, REAR, M430A1C.*

Data plate location

Instruction and caution plates are located at pertinent points.

Identification is found in the rear on the right side stamped into frame.

Classification: Standard B (OTCM 36676).

CHARACTERISTICS

Weight:	
Net	7,122 lb
Payload	4,950 lb
Gross	12,072 lb
Tires:	
Ply	8
Size	9.00 x 16
Number	8
Pressure:	
Highway	
Cross country	
Sand	
Length	330 in.
Width	97 in.
Height	127 in.
Ground clearance	14¾ in.
Fifth wheel, type	kingpin with drawbar
Electrical system:	
Trailer	24 volts
Emergency	24 volts
Equipment operation	120 volts
Brakes:	
Service:	
M244	electric
M244A1	air-over-hydraulic
Parking	
M244	electric
M244A1	manual

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per
Length	
Width	
Height	
Volume	2,285 cu ft
Area	208 sq ft
Gross weight	
Ship tons	57

Outside Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Reference: TM 9-2330-212-24P.

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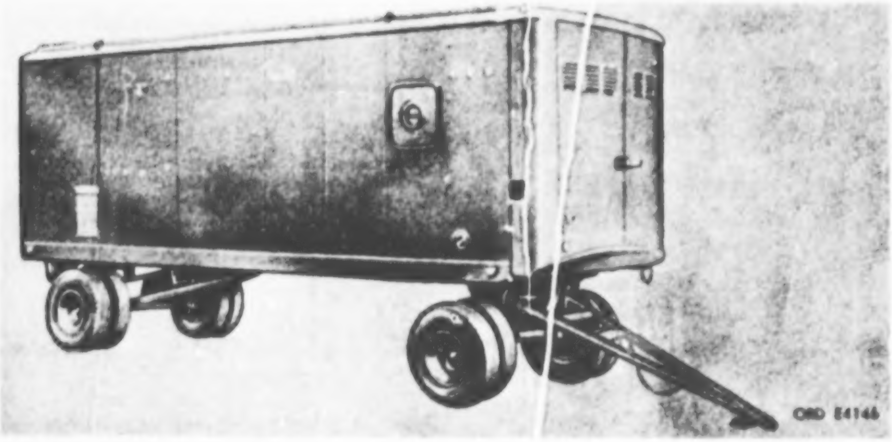
* For characteristics and data, see items in section 13 and 21, and on pages 22-20 and 22-21.

TRAILER, VAN: FIRE CONTROL MOUNT, 3-TON, 4-WHEEL, M242 AND M242A1



Major item

Model	*Line item No.*	*Federal stock No.*
M242		2330-835-8621
M242A1		2330-542-4656

General

TRAILER, VAN: fire control mount, 3-ton, 4-wheel, M242 and M242A1, is used to transport and house antiaircraft fire control equipment.

Each trailer is designed to be towed by a TRUCK, CARGO: 2½-ton 6 x 6.*

The body is made up of magnesium panels with paper honeycomb core.

There is a door in the rear and a tailgate.

Trailer is provided with gasoline personnel heater and ducts.

Power is supplied to the chassis lighting system and electric brake system by the generator of towing vehicle.

Four manually operated jacks are provided with each trailer, hinged to underside of chassis.

Rear dolly has manually operated parking brakes.

Differences among models

M242 is equipped with DOLLY, TRAILER, FRONT: M429* and DOLLY, TRAILER, REAR: M430.*

M242A1 is equipped with DOLLY, TRAILER, FRONT, M429A1* and DOLLY, TRAILER, REAR, M430A1.*

On M242 electric brakes are employed.

On M242A1 air-hydraulic brakes are employed.

M242A1 is equipped with air reservoir and emergency relay valve.

Data plate location

Instructions and caution plates are located at pertinent points.

Identification plate (nameplate) is found in the rear on the right side.

Classification: Standard B (OTCM 36876).

CHARACTERISTICS

Weight:	
Curb weight	7,370 lb
Gross weight, including body and payload:	
Cross-country	13,760 lb
Highway	13,760 lb
Tires:	
Ply	8
Size	9.00 x 16
Number	8
Pressure:	
Highway	
Cross-country	
Sand	
Length	344 in.
Width	96 in.
Height	135 in.
Minimum ground clearance:	
Front dolly	17 in.
Rear dolly	16 in.
Towing speed:	
Cross-country	15 mph
Highway	50 mph
Brakes:	
Service:	
M242	electric
M242A1	air-over-hydraulic with air reservoir
Parking	manual on rear dolly
Electrical system:	
Trailer	24 volts
Equipment	120 volts

PERFORMANCE

Fording depth	same as towing vehicle

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	per
Length	344 in.
Width	96 in.
Height	135 in.
Volume	2,488 cu ft
Area	
Gross weight	
Ship tons	62

Outside Continental United States

Shipped	per
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Reference: TM 9-2330-212-24P.

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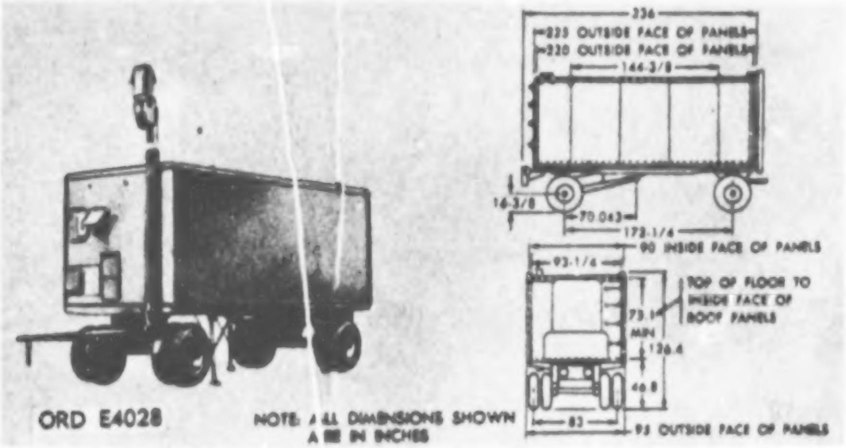
* For characteristics and data, see item in section 21 and on pages 22-20 and 22-21.

TRAILER, VAN: LAUNCHING CONTROL, M262, M262A1, AND M262A1C


236
223 OUTSIDE FACE OF PANELS
220 OUTSIDE FACE OF PANELS
144-3/8
14-3/8
70.043
172-1/4
90 INSIDE FACE OF PANELS
93-1/4
TOP OF FLOOR TO INSIDE FACE OF ROOF PANELS
73.1 MIN
126.4
46.8
83
93 OUTSIDE FACE OF PANELS

ORD E4028

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Model	*Line item No.*	*Federal stock No.*
M262		2330-835-8038
M262A1		2330-046-7818
M262A1C		

General

TRAILER, VAN: launching control, M262, M262A1, and M262A1C, is used to house the launcher control console, telephone switchboard, miscellaneous communications equipment, heating, and ventilating unit.

Each trailer is designed to be towed by a TRUCK, CARGO: 2½-ton 6 x 6.*

The body is made up of magnesium panels with paper honeycomb core.

There is a door in the rear and a tailgage.

Trailer is provided with gasoline personnel heater and ducts.

Power is supplied to the chassis lighting system and electric brake system by the generator on towing vehicle.

Four manually operated jacks are provided with each trailer, hinged to underside of chassis.

Differences among models

Trailer M262A1C is equipped with DOLLY, TRAILER, FRONT: M420A1G* and DOLLY, TRAILER, REAR, M430A1G.*

Data plate location

Instructions and caution plates are located at pertinent points.

Identification plate (nameplate) is found in front near bottom of frame just left of refrigeration exhaust on attached plate.

Classification

M262	Standard B (OTCM 36841)
M262A1	Standard B (OTCM 36876)
M262A1C	

CHARACTERISTICS

Weight:	
Net	6,800 lb
Gross	12,400 lb
Tires:	
Ply	8
Size	9.00 x 16
Number	8
Pressure:	
Highway	
Cross-country	
Sand	
Ground clearance:	
Front dolly	17 in.
Rear dolly	16 in.
Drawbar height (adjustable)	27 in.
Fifth wheel:	
Size	28½ in.
Type	kingpin w/drawbar
Height	30¼ in.
Lights:	
Trailer	24 volts
Equipment	120 volts
Brakes:	
M262	6-volt electric
M261A1 and M261A1C	air hydraulic
Length:	
M262 and M262A1	225 in.
M262A1C	257¼ in.
Width	95 in.
Height:	
M262 and M262A1	126⅝ in.
M262A1C	128¼ in.

PERFORMANCE

Fording depth	same as towing vehicle

EQUIPMENT

Basic Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

M262 and M262A1:

Shipped	*Within Continental United States* per
Length	
Width	
Height	
Volume	1,622 cu ft
Area	208 sq ft
Gross weight	
Ship tons	

---

* For characteristics and data, see item in section 21 and on pages 22-20 and 22-21.

Outside Continental United States

Shipped per
Length
Width
Height
Volume
Area
Gross weight
Ship tons

M262A1C:

Within Continental United States

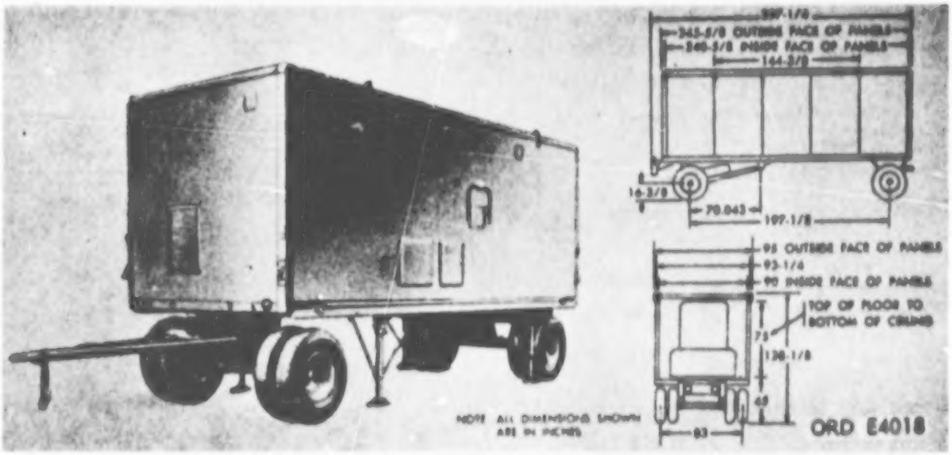
Shipped per
Length
Width
Height
Volume 1,400 cu ft
Area
Gross weight
Ship tons

Outside Continental United States

Shipped per
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: TM 9-2330-212-14, TM 9-2330-212-24P.

TRAILER, VAN: RADAR TRACKING CENTRAL, M258 AND M258A1



397-1/8
245-5/8 OUTSIDE FACE OF PANELS
240-5/8 INSIDE FACE OF PANELS
144-3/8
14-3/8
70.043
197-1/8
95 OUTSIDE FACE OF PANELS
93-1/4
90 INSIDE FACE OF PANELS
TOP OF FLOOR TO BOTTOM OF CEILING
75
130-1/8
45
83
NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD E4018

Major item

Model	*Line item No.*	*Federal stock No.*
M258		2330-835-8634
M258A1		2330-047-3614

General

TRAILER, VAN: radar tracking central, M258 and M258A1, is used to house radar control equipment.

Each trailer is designed to be towed by a TRUCK, CARGO: 2½-ton 6 x 6.*

The body is made up of magnesium panels with paper honeycomb core.

There is a door in the rear and a tailgate.

Trailer is provided with gasoline personnel heater and ducts.

Power is supplied to the chassis lighting system and electric brake system by the generator on towing vehicle.

Four manually operated jacks are provided with each trailer, hinged to underside of chassis.

Differences among models

Emergency brake switch is found only on M258.

Data plate location

Instructions and caution plates are located at pertinent points.

Identification plate (nameplate) is found in rear on right side of tailgate near floor level on the frame.

Classification: Standard B (OTCM 36876).

CHARACTERISTICS

Weight:
  Net.......6,850 lb
  Gross.......11,949 lb
Tires:
  Ply.......8
  Size.......9.00 x 16
  Number.......8
  Pressure:
    Highway.......
    Cross-country.......
    Sand.......
Length.......245⅝ in.
Width.......95 in.
Height.......128⅛ in.
Ground clearance.......14⅜ in.
Fifth wheel:
  Size.......38⅝ in.
  Type.......kingpin w/drawbar
  Height.......30⅜ in.
Electrical system:
  Trailer.......24 volts
  Equipment.......120 volts
Brakes:
  M258.......6-volt electric
  M258A1.......air-over-hydraulic

PERFORMANCE

Fording depth.......same as towing vehicle

EQUIPMENT

Basic Issue Items: See TM 9-2330-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
  Length.......
  Width.......
  Height.......
  Volume.......1,794 cu ft
  Area.......218 sq ft
  Gross weight.......
  Ship tons.......

Outside Continental United States

Shipped per
  Length.......
  Width.......
  Height.......
  Volume.......
  Area.......
  Gross weight.......
  Ship tons.......

References: TM 9-2330-212-14, TM 9-2330-212-24P.

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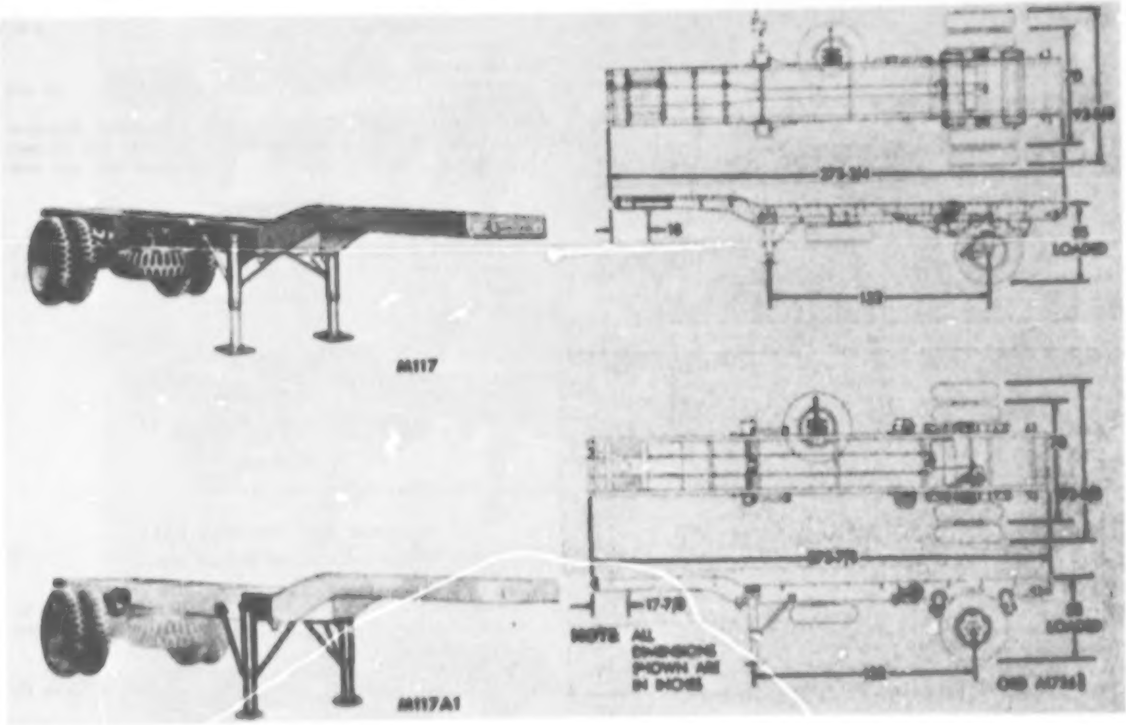
* For characteristics and data, see item in section 21.

CHASSIS, SEMITRAILER: 6-TON, 2-WHEEL. M117 AND M117A1



Major item

Model	*Line item No.*	*Federal stock No.*
M117		2330-834-3704
M117A1		2330-542-4428

General

CHASSIS, SEMITRAILER: 6-ton, 2-wheel, M117 is basic chassis for the TRAILER, STAKE: 6-ton, 2-wheel, M118, and SEMI-TRAILER, VAN: cargo, 6-ton, 2-wheel, M119** M117A1 is basic chassis for the SEMITRAILER, STAKE: 6-ton, 2-wheel, M118A1 and SEMITRAILER, VAN: shop, 6-ton, 2-wheel, M119A1.** Chassis M117 or M117A1 is a 2-wheel vehicle designed to be towed by the TRUCK, TRACTOR: 2½-ton, 6x6, M48,* or similar vehicle of sufficient capacity, on highway or cross country. Towing facilities are provided by a pickup plate and king pin, and if necessary the chassis can be equipped with a conventional semiautomatic fifth wheel. The chassis frame is made of two pressed steel channel side rails reinforced by 13 pressed steel channel crossmembers. All members are welded together at right angles to form an integral frame assembly. The spring front and rear supporting beams and the pickup plate are welded to the underside of the frame. Spring front and rear hangers are welded to the spring supporting beams on the M117 only. On the M117A1, the spring front and rear hangers are welded directly to the frame main rails. In addition, miscellaneous brackets are welded to the frame. The chassis is equipped with service brakes, parking brakes, and a retracting landing gear assembly which is used to support the chassis when not coupled to a towing vehicle. The chassis has a spring suspension, and a spare wheel and the tire carrier assembly. Wheels are the dual, pressed-steel type, mounted by hub studs.

*For characteristics and data, see item in section 21.
**For characteristics and data, see item on pages 22-33 and 22-40.

Differences among models

M117 has air brakes, and 10-leaf main spring and 5-leaf auxiliary spring assemblies. M117A1 has air-over-hydraulic brakes, an 11-leaf spring assembly, a suspension assembly which is readily removable for air transport, and differs in spring hanger bracket and landing gear design. The M117A1 does not have a hand brake; instead, chock blocks are provided.

Data plate location

The identification plate is located on the right main rail of the chassis frame at the forward and above the pickup plate.

Classification:

M117	Standard B (OTCM 36876)
M117A1	Standard A (OTCM 37119)

CHARACTERISTICS

Weight:	
Net	7,180 lb
Payload:	
Cross-country	12,000 lb.
Highway	16,200 lb
Gross including body and payload:	
Cross-country:	
M118, M118A1, body	19,140 lb
M119, M119A1, body	19,180 lb
Highway:	
M118, M118A1, body	23,340 lb
M119, M119A1, body	23,380 lb
Towing facilities	Pickup plate and kingpin

Minimum ground clearance	19¾ in.
Kingpin to front:	
M117	18 in.
M117A1	17⅞ in.
Length:	
M117	275¾ in.
M117A1	275⅞ in.
Width	92⅝ in.
Height platform floor, loaded	44 ft, 7 in.
Brakes:	
Service:	
M117	air-operated
M117A1	air-over-hydraulic
Operating air pressure	100 lb
Parking:	
M117	hand lever operated
M117A1	chock blocks
Landing gear:	
Type	vertical, retractable
Legs	2
Operation	manual, cranking handle
Gear box	2-speed
Manufacturer:	
M117	Homan & Co.
M117A1	Austin Co.
Tires:	
Number (1 spare)	5
Type	military pneumatic
Size	9.00 x 20
Ply	8
Tire inflation:	
Highway	50 psi
Cross-country	35 psi
Sand	15 psi
Tread:	
Center-to-center between duals	70 in.
Outside-to-outside	92⅝ in.
Axle:	
Type	tube
Load, maximum	14,000 lb
Diameter	4½ in.
Wheels:	
Type	dual, pressed-steel
Mounting	hub studs
Spring assembly:	
M117:	
Main spring	10 leaves
Auxiliary spring	5 leaves
M117A1	11 leaves
Frame:	
Type	welded pressed and structural steel
Length	270¾ in.
Width	34 in.
Beam depth:	
Main side rails	10⅛ in.
Channel crossmembers:	
Main	10 in.
Forward end	6 in.
Manufacturer	
Electrical system:	
Potential	24 volt
Taillights:	
Manufacturer	Standard Ordnance
Left	service tail and stop and blackout
Right	blackout tail and stop

PERFORMANCE

Towing speed (max):	
Highways and improved roads	50 mph
Cross-country	30 mph
Sand	
Fording depth	

EQUIPMENT

Basic Issue Items: See TM 9-2330-210-14, appendix III.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 2½-ton, 6x6, M48*

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 semitrailer chassis	
Length	275⅞ in.
Width	92⅝ in.
Height	
Volume (uncrated)	
Area	177.5 sq. ft.
Gross weight	
Ship tons	

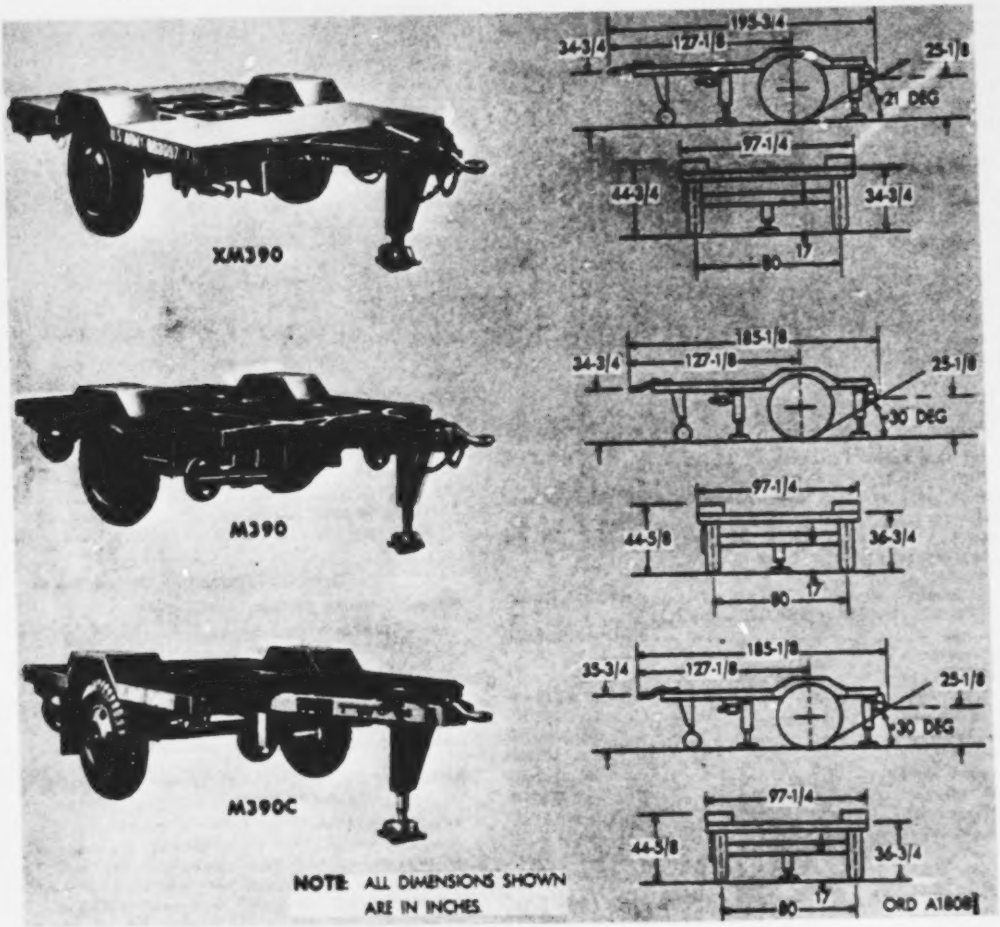
Outside Continental United States

Shipped 1 semitrailer chassis	
Length	275⅞ in.
Width	92⅝ in.
Height	
Volume	
Area	177.5 sq ft.
Gross weight	
Ship tons	

References: TM 9-2300-223-20P, TM 9-2330-210-14.

*For characteristics and data, see item in section 21.

CHASSIS, TRAILER: 2-TON, 2-WHEEL, XM390, M390, AND M390C


XM390
M390
M390C
195-3/4
127-1/8
34-3/4
25-1/8
21 DEG
97-1/4
44-3/4
34-3/4
80
17
185-1/8
127-1/8
34-3/4
25-1/8
30 DEG
97-1/4
44-5/8
36-3/4
80
17
185-1/8
127-1/8
35-3/4
25-1/8
30 DEG
97-1/4
44-5/8
36-3/4
80
17
ORD A1808

NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Major item

Model	*Line item No.*	*Federal stock No.*
XM390	....	2330-542-4120
M390	....	2330-446-7515
M390C	....	2330-542-3491

General

CHASSIS, TRAILER: 2-ton, 2-wheel, XM390, M390, and M390C are general purpose vehicles. The XM390 and M390 are for transporting various types of electronic equipment and M390C for transporting a pallet which contains a cluster of three missiles. The vehicles are for use in the ground vehicle support of the Hawk Missile System.

Each chassis consists essentially of a frame, deck plates (except M390), suspension system, two-wheels, air-over-hydraulic service brakes, individually operated handbrakes (for each wheel), 24-volt electrical system, retractable support assembly (landing gear), leveling support jacks, boarding ladder, mud guards, black-out lighting, and a towing lunette.

Differences among models

These chassis are different in the deck plating, and in the number of leveling jacks.

Data plate location

Identification plates are located on the right side of the "A" frame drawbar.

Classification:

XM390	No type classification
M390	No type classification
M390C	No type classification

CHARACTERISTICS

	XM390	M390	M390C
Length (overall)	195¾	185⅛	185⅛
Width:			
Implaced	111 in.	111 in.	111 in.
Mobile	97¼ in.	97¼ in.	97¼ in.
Height (overall):			
Loaded	44¾ in.	44⅝ in.	44⅝ in.
Empty	34¾ in.	36¾ in.	36¾ in.

Curbweight:	
XM390	
M390	3,770 lb
M390C	3,650 lb
Manufacturer	Eidal Manufacturing Co., Inc.

best copy available

Gross weight including body and payload:

	XM390	M390	M390C
Cross country		7,770 lb	7,650 lb
Highway		7,770 lb	7,650 lb

Lunette:

Height empty	36 in.
To centerline of axle	124 in.
To centerline of landing gear	22 in.

Weight distribution:

	XM390	M390	M390C
Lunette eye		390 lb	155 lb
Axle		3,390 lb	3,495 lb
Landing gear		240 lb	505 lb
Axle		3,165 lb	3,410 lb

Ground clearance	17 in.

Springs:

Manufacturer	Saginaw Product Co.
Model	
Type	Semi-elliptical leaf
Size	3½ in. x 52 in.
No. of leaves	8

Wheels:

Tread inner	80 in.
Manufacturer	Budd Co.
Rim size	20 x 7.5
No. of stud holes	6

Tires:

Type	military, cross-country nondirectional
Size	9:00 x 20 - 8 ply
Pressure	50 psi

Service brakes:

Drum size:	
Diameter	15 in.
Width	3 in.
Actuation	air-over-hydraulic

Parking brakes:

Drum size:	
Diameter	15 in.
Width	3 in.
Actuation	mechanical
Mounting	service brakes
Effective slope	30 percent

Electrical system	24 volts

PERFORMANCE

Maximum towing speed:

Cross country	25 mph
Highway	50 mph
Angle of departure	30 deg
Fording depth	completely submerged

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, CARGO: 2½-ton, 6 x 6 (type)

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 chassis uncrated per car.

Length	188¼ in.
Width	96 in.
Height	44¼ in.
Volume	
Area	
Gross weight	
Ship tons	

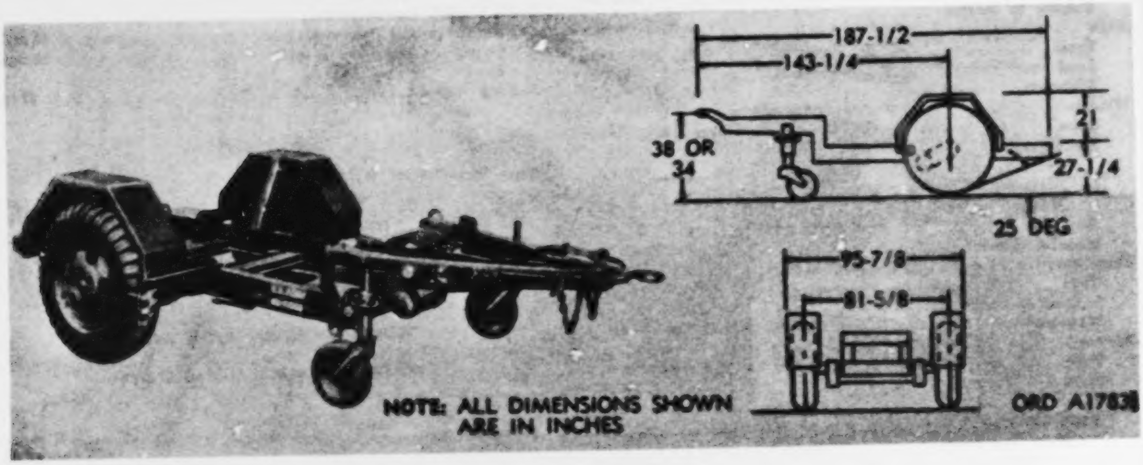
Outside Continental United States

Shipped 1 chassis per car.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-223-20P, TM 9-2330-235-14, TM 9-2330-235-24P, LO 9-2330-235-12.

CHASSIS, TRAILER: 3½-TON, 2-WHEEL, M353



Major Item

Model	*Line item No.*	*Federal stock No.*
M353	4-05625-06	2330-542-2831

General

CHASSIS, TRAILER: 3½-ton, 2-wheel, M353 is designed to mount various type bodies. It consists essentially of a heavy-duty frame, supported by an offset axle assembly with leaf spring suspension and two retractable swivel casters at the front. The frame is rectangular shape with a raised "A" shaped extension at the front for mounting the lunette. The tires are 11:00 x 20, mounted on 20-inch wheels. Each wheel is covered by a welded fender assembly. Air over hydraulic service brakes are operated by air from the towing vehicle through an air filter, air chamber assembly, and master cylinder assembly. For parking, the brakes may be applied by a brake lever assembly positioned on the frame near the wheels. Two casters, positioned at each side on the front of the vehicle, are mounted on 4:00 x 8 rubber tires and are used to support the front end of the trailer when trailer is not attached to a towing vehicle. The casters are secured in either raised or lowered positions by a gravity pin and chain assembly. The handling bars are provided at the front of the frame so the trailer can be raised to connect and/or disconnect the lunette from the pintle of the towing vehicle. Safety chains are also provided and are welded to each side of the frame.

Differences among models

Data plate location

The nameplate, showing vehicle nomenclature, federal stock number, model number, publications, and data, is attached to the right front side of the "A" frame extension.

Classification: Standard A (OTCM 37252)

CHARACTERISTICS

Weight:	
Net:	
Maximum	2,650 lb
Minimum	2,280 lb
Payload:	
Cross-country	7,000 lb
Highway	8,000 lb
Towing facilities:	
Type	lunette coupler, 2-way adjustable
Height:	
Maximum	35⅛ in.
Minimum	31⅛ in.
Minimum ground clearance	
Length	187½ in.
Width	95⅞ in.
Height	48⅛ in.
Brakes:	
Service:	
Actuation	air-over-hydraulic
Type	2-shoe, double cylinder
Operating air pressure	100 psi
Parking hand lever assembly:	
Hand levers:	
Number	2
Location:	
Right side	under frame
Left side	under frame
Actuation	mechanical
Tires:	
Trailer:	
Number	2
Type	military, pneumatic, non-directional, cross-country
Size	11.00 x 20
Ply	12
Maximum air pressure	70 psi
Casters:	
Number	2
Type	military, rubber, retractable
Size	4.00 x 8
Ply	4
Manufacturer	Saginaw Products Corp.
Tire inflation:	
Trailer:	
Highway	70 psi
Cross-country	50 psi
Sand	
Casters	65 psi

Tread:	
Center to center between tires	81⅝ in.
Outside to outside	
Axle:	
Type	drop, tube type
Load maximum	10,000 lb.
Diameter	5 in.
Wheels:	
Type	pressed steel single
Mounting:	
Type	hub studs
Diameter of stud circle	8¾ in.
Number of stud holes	6
Rim size	7.5 x 20
Manufacturer	Budd Co.
Suspension:	
Type	leaf spring
Number of leaves	15
Manufacturer	Utility Tool and Body Co.
Frame:	
Type	welded pressed and structural steel, low bed
Length	178⅝ in.
Width	49 in.
Beam depth:	
Main side rails:	
Length	116¼ in.
Channel	8 x 2½ in.
Thickness	¼ in.
Crossmembers:	
Length	48⅛ in.
Width	10½ in.
Height	2½ in.
Thickness	21/64 in.
Manufacturer	Utility Tool and Body Co.
Electrical system:	
Power source	towing vehicle
Operation	towing vehicle light switch
Voltage	24v

Lights:
Right:
Blackout service, tail, and stoplight
Blackout stoplight
Left:
Blackout service, tail, and stoplight

PERFORMANCE

Towing speed (recommended):	
Highways and improved roads	50 mph
Unimproved roads and trails	35 mph
Sand	
Fording depth	27 in.

EQUIPMENT

Basic Issue Items: See TM 9-2330-247-14.

INSTRUCTIONAL MATERIAL

PRIME MOVER

STORAGE AND SHIPMENT DATA

Within Continental United States

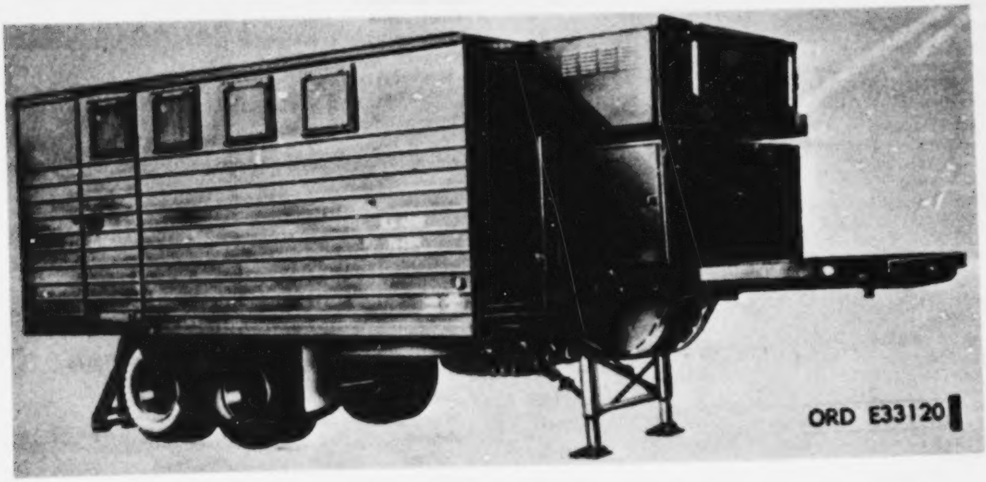
Shipped 1 trailer chassis	
Length	187 ½ in.
Width	96 in.
Height	48 in.
Volume (uncrated)	510 cu. ft.
Area	437 sq. ft.
Gross weight	
Ship tons	13

Outside Continental United States

Shipped 1 trailer chassis	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-228-20P, TM 9-2330-247-14, TM 9-2330-247-24P.

SEMITRAILER, VAN: EXPANSIBLE, 6-TON, 4-WHEEL, M313



Major item

Model	*Line item No.*	*Federal stock No.*
M313	439015	2330-772-5273

General

SEMITRAILER, VAN: expansible, 6-ton, 4-wheel, M313, is designed to provide a mobile semitrailer van shop with expanding sides for the installation of maintenance shop sets to be used by personnel maintaining and repairing military equipment in the field. It consists of the expansible van body mounted on the CHASSIS, SEMITRAILER: 6-ton, 4-wheel, M295A1,* and is towed by the TRUCK, TRACTOR: 5-ton, 6 x 6, M52,** or similar vehicle. The van body is of double-wall construction consisting of an outer aluminum skin and an inner plywood covering and is temperature insulated between the inner and outer wall members. The van body is designed to expand to approximately twice the volume it encloses when in the retracted or traveling position. This is achieved by expanding side panels actuated by expanding and retracting mechanisms, and counterbalanced hinged roof and floor sections, which form extensions of the floor and of the roof when the van body is in the expanded position. The van body is provided with electrical system lights and service receptacles, two gasoline-burning heaters, stabilizing or leveling jacks, and two aluminum ladders. It has double doors in the rear wall. A blackout relay is actuated by the door-operated switches to provide blackout protection when the doors are opened.

Differences among models

Data plate location

The identification plate is located on the lower front corner of the right side of the van.

Classification: Standard A (OTCM 37347)

CHARACTERISTICS

Type	semitrailer van body
Weight:	
Net	14,700 lb
Payload:	
Cross-country	10,000 lb
Highway	14,000 lb
Gross including chassis:	
Cross-country	24,700 lb
Highway	28,700 lb
Length	324 in.
Width:	
Body retracted	96 in.
Body expanded	170 in.
Height (loaded)	132 in.
Ground clearance (with gear retracted)	20½ in.
Tread (center-to-center between duals)	72 in.
Landing gear:	
Manufacturer	Austin
Type	collapsible and adjustable
Axle:	
Type	tubular Ordnance standard 10,000 lb
Diameter	4½ in.
Suspension system:	
Type	tandem
Number of springs:	
Main	2
Helper	2
Wheels, type	pressed steel
Tires:	
Number	8
Size	9.00 x 20
Design	cross-country nondirectional
Number of plies	8
Type	military pneumatic
Pressure:	
Highway	40 psi
Cross-country	48 psi
Sand	32 psi
Brakes:	
Parking	chock blocks
Service:	
Actuation	air-over-hydraulic
Make	Wagner Electric Corp.
Size:	
Diameter	15 in.
Width	$3\frac{11}{32}$ in.
Operating air pressure	100 psi

*For characteristics and data, see item on page 22-3.

**For characteristics and data, see item in section 21.

Towing facilities	kingpin
Heaters:	
Number	2
Manufacturer	Hunter
Model	UH-68
Output	60,000 btu/hr
Temperature rise (air)	140° F.
Air Conditioner:	
Manufacturer	York
Model	V-81
Output	24,000 btu/hr
Temperature range:	
Minimum	65° F.
Maximum	92° F.
Electrical system:	
External lights:	
Potential	24 v dc
Front:	
Right:	
Clearance	amber
Blackout	amber
Left:	
Clearance	amber
Blackout	amber
Rear:	
Right:	
Clearance	red
Blackout	red
Left:	
Clearance	red
Blackout	red
Internal lights and power:	
Ceiling lights, service receptacles, heater units	110 v ac
Air-conditioning unit	220 v ac
Power source	external

PERFORMANCE

Towing speed:	
Cross-country	20 mph
Highway	45 mph
Side slope	30 percent
Departure angle	65 deg
Fording depth	44 in.
Fordability, chassis submerged	15 min.
Performing temperatures:	
Maximum	+125° F.
Minimum	—65° F.

EQUIPMENT

Basic Issue Items: See TM 9-2330-238-14.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 5-ton, 6 x 6, M52**

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 van semitrailer	
Length	324 in.
Width	96 in.
Height	132 in.
Volume	2376 cu ft
Area	216 sq ft
Gross weight	14,700 lb
Ship tons	59.40

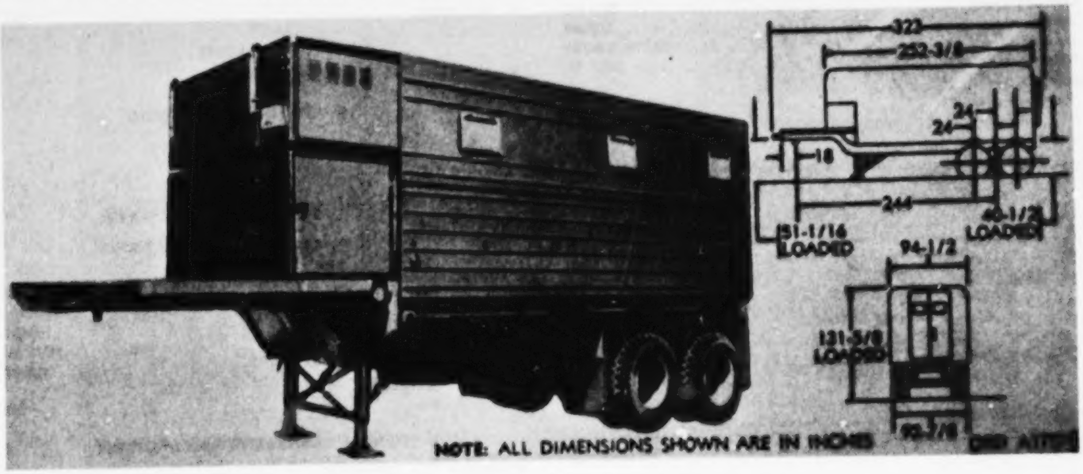
Outside Continental United States

Shipped 1 van semitrailer	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2330-238-14, TM 9-2330-238-24P.

**For characteristics and data, see item in section 21.

SEMITRAILER, VAN: SHOP, FOLDING SIDES, 6-TON, 4-WHEEL, M447 AND M447C



Major Item

Model	*Line item No.*	*Federal stock No.*
M447	....	2330-542-5709
M447C	....	2330-477-9999

General

SEMITRAILER, VAN: shop, folding sides, 6-ton, 4-wheel, M447 and M447C is designed to provide a mobile semitrailer van shop with folding sides for the Army and for use as a field spare parts carrier. It is intended for the installation of maintenance shop sets to be used by personnel maintaining and repairing military equipment in the field, for use on highway or cross-country. It is mounted on CHASSIS, SEMITRAILER: 6-ton, 4-wheel, M295 or M295A1* and is towed by the TRUCK, TRACTOR: 5-ton, 6x6, M52,** or similar vehicle. It is composed of a van body constructed of electrically welded angle iron frame which has double rear doors, and two full length side doors which are sectionalized longitudinally so that the lower half hinges downward to form an extension of the floor and the upper half hinges upward to form a roof extension. Protection from the weather is achieved when canvas side curtains are attached. The van body is provided with electrical system lights and power outlets, two heaters, stabilizing or leveling jacks, guardrails, and ladder, and is fully temperature insulated.

Differences among models

The M447C is the same as the M447 except that the M447C is equipped with an air conditioner.

Data plate location

The identification plate is located on the lower front side of the right side door.

Classification:

M447	Standard A (OTCM 36876)
M447C	Standard A (OTCM 37991)

CHARACTERISTICS

Type	semitrailer van body
Weight:	
Net	15,500 lb
Payload:	
Cross-country	12,000 lb
Highway	15,000 lb
Gross including body and payload:	
Cross-country	20,000 lb
Highway	23,000 lb
Length	323 in.
Width, sides folded:	
In	94½ in.
Out	175 in.
Height (loaded)	131⅝ in.
Ground clearance (with gear retracted)	20½ in.
Tread (center-to-center between duals)	72 in.
Landing gear:	
Manufacturer	Austin
Type	collapsible and adjustable
Axle:	
Type	tubular Ordnance standard 10,000 lb
Diameter	4½ in.
Suspension system:	
Type	tandem
Number of springs:	
Main	2
Helper	2
Wheels, type	pressed steel
Tires:	
Number	8
Size	9.00 x 20
Design	cross country nondirectional
Number of plies	8
Type	military pneumatic
Pressure:	
Highway	40 psi
Cross-country	45 psi
Sand	32 psi
Brakes:	
Parking	chock blocks
Service:	
Actuation	air-over-hydraulic
Manufacturer	Wagner Electric Corp.
Size:	
Diameter	15 in.
Width	3$\frac{11}{32}$ in.
Operating air pressure	100 psi
Towing facilities	Kingpin

*For characteristics and data, see item on page 22-3.

**For characteristics and data, see item in section 21.

Heaters:	
Number	2
Manufacturer	Hunter
Model	UH-68
Output	60,000 btu/hr
Temperature rise (air)	140° F.
Electrical system:	
External lights:	
Potential	24 v
Front:	
Right:	
Blackout clearance	amber
Service	amber
Left:	
Blackout clearance	amber
Service	amber
Rear:	
Right:	
Blackout clearance	red
Service	red
Left:	
Blackout clearance	red
Service	red
Internal lights and power:	
Potential	120/208 v ac 3-phase, 4-wire
Power source	external

PERFORMANCE

Towing speed:	
Cross-country	20 mph
Highway	45 mph
Side slope	20 percent
Departure angle	65 deg
Fording depth	44 in.
Fordability, chassis submerged	15 min
Performing temperatures:	
Maximum	+125° F.
Minimum	—65° F.

EQUIPMENT

Basic Issue Items: See TM 9-2330-238-14.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, TRACTOR: 5 ton, 6x6, M52**

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 van semitrailer	
Length	328 in.
Width	94½ in.
Height	131⅝ in.
Volume	2344 cu ft
Area	213 sq ft
Gross weight	
Ship tons	58.60

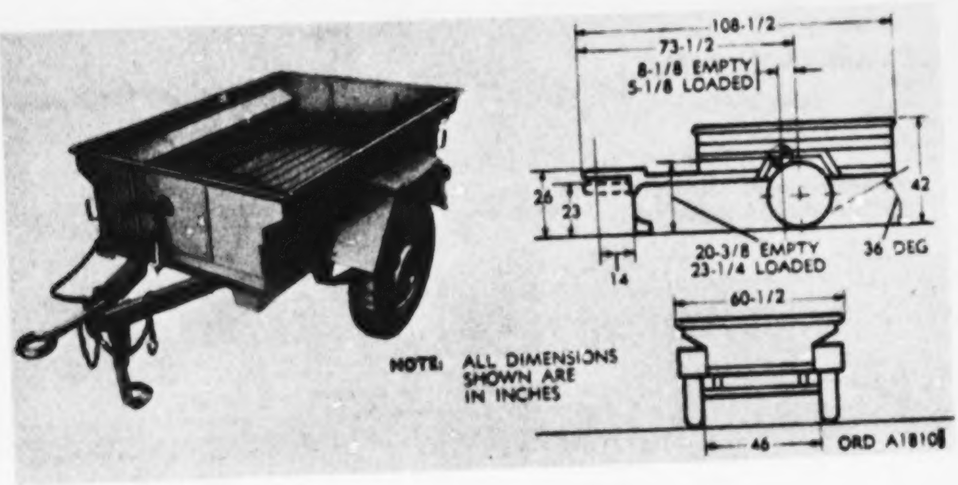
Outside Continental United States

Shipped 1 van semitrailer	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM-9-2330-238-14, TM 9-2330-238-24P.

** For characteristics and data, see item on page 22-3.

TRAILER, CARGO: ¼-TON, 2-WHEEL, M416



Major item

Model	*Line item No.*	*Federal stock No.*
M416	4-57110-05	2330-706-5495

General

TRAILER, CARGO: ¼-ton, 2-wheel, M416, is a 2-wheel general purpose cargo carrier designed to carry a load of 500 pounds cross-country. The body is of one piece welded construction, bolted to the CHASSIS, TRAILER: ¼-ton, 2-wheel, M569** at 14 lug locations. The body is watertight and will float the trailer and a 500-pound load in fording operations. Two drain valves are provided, one in the left front, and one in the right rear of the floor. The trailer is equipped with two taillights which are operated from the towing vehicle. An intervehicular cable is provided for connecting the trailer electrical system with that of the towing vehicle and directional signal lights are provided. An "A" frame drawbar is bolted to the frame side members. It serves as a mount for the towing connections and the support leg. The support leg is a movable support which is used to keep the trailer upright when the trailer is not connected to a towing vehicle. A canvas paulin, which fastens to hooks welded to the body, covers the trailer cargo. The trailer is designed to be towed by TRUCK, UTILITY: ¼-ton, 4x4, M151.* A two-position bracket for the trailer lunette also makes the trailer adaptable to being towed by TRUCK, UTILITY: ¼-ton, 4x4, lightweight, M422.*

Differences among models

Data plate location

The data plate is located on the right rear of the body.

Classification: Standard A (OTCM 37760)

CHARACTERISTICS

Weight:	
Net	570 lb
Payload:	
Off highway	500 lb
On highway	750 lb
Gross:	
Off highway	1070 lb
On highway	1320 lb
Weight distribution:	
Empty:	
Landing leg	88 lb
Axle	482 lb
Loaded:	
Off highway:	
Landing leg	110 lb
Axle	960 lb
On highway:	
Landing leg	112 lb
Axle	1208 lb
Length overall	108½ in.
Width overall	60½ in.
Height overall	42 in.
Body inside dimensions:	
Length	96 in.
Width	41 in.
Height	11 in.
Lunette height (two position)	26 in. 23 in.
Departure angle (loaded)	20 deg
Center of gravity forward of rear axle:	
Empty	28 in.
Loaded	41½ in.
Tires:	
Size	7.00 x 16
Ply	6
Pressure (psi):	
Highway	25
Cross-country	22
Sand	15
Tread	52⅝ in.
Parking brake, type	mechanical
Springs:	
Type	semielliptical
Length (centerline of eyes — flat)	36¼ in.
Width	1¾ in.
Number of leaves	10
Electrical system	24 volt

*For characteristics and data, see item in section 21.

**Characteristics and data will be added at a later date.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2330-251-14P.

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, UTILITY: ¼-ton, 4x4, M151
TRUCK, UTILITY: ¼-ton, 4x4, lightweight, M422

STORAGE AND SHIPMENT DATA

Within Continental United States

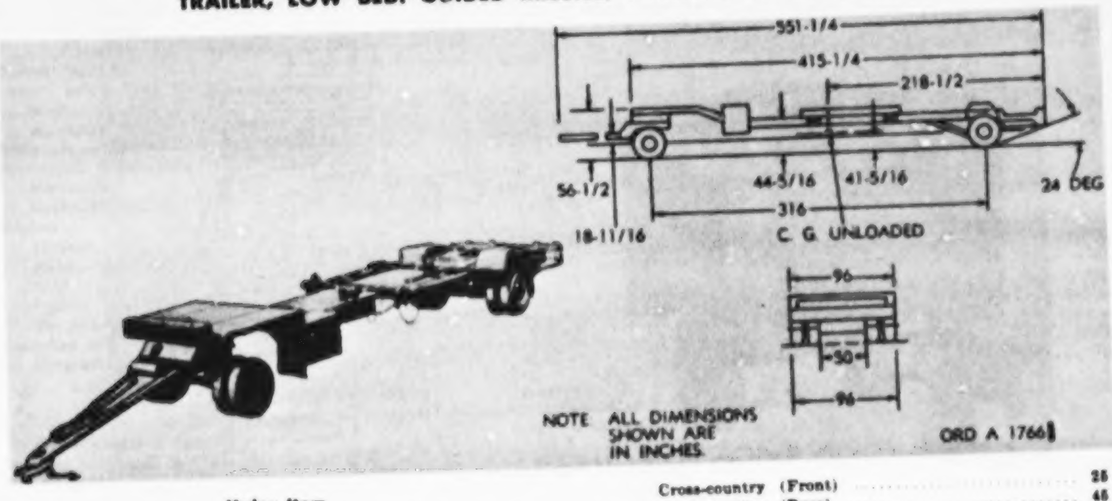
Shipped per	
Length	9 ft, 3⅝ in.
Width	5 ft, ⅝ in.
Height	3 ft, 7⅝ in.
Volume	159 cu ft
Area	
Gross weight	
Ship tons	3.97

Outside Continental United States

Shipped per	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-222-20P, TM 9-2330-251-14P.

TRAILER, LOW BED: GUIDED MISSILE, 7-TON, 4-WHEEL, XM529



Major item

Model	*Line item No.*	*Federal stock No.*
XM529		2330-780-0801

General

TRAILER, LOW BED, GUIDED MISSILE, 7-TON, 4-WHEEL: XM529, is a special-purpose vehicle designed to load, unload, and transport guided missiles used in the NIKE-AJAX/HERCULES Guided Missile System.

The trailer has a welded steel box-type chassis mounted on a front and rear dolly, the front dolly being steerable. Both dollies are equipped with spring compressing systems and the chassis is equipped with special equipment for handling the guided missiles.

The towing vehicle should have the proper connections for the trailer draw bar, electrical system and air-over-hydraulic brake system.

***Caution:* This vehicle exceeds the dimensions limitations permitted under AR 700-105. Advance planning will be required in the selection of routes in respect to bridge capacities, and underpass and road clearances involved.**

Differences among models

Data plate location

Data plate is located on the right side of the trailer chassis to the rear of the front fender.

The nameplate is located in front of the data plate.

Classification: Limited production (OTCM 37351).

CHARACTERISTICS

*Length	551¼ in.
*Width (w/bumper fenders extended)	103 in.
Width (w/bumper fenders retracted)	96 in.
Height (empty)	56½ in.
Height (w/payload)	52 in.
Overhead clearance (w/payload)	127 in.
Ground clearance	12 in.
Wheelbase	316 in.
Weight:	
Empty	14,500 lb
Payload	13,500 lb
Gross	28,000 lb
Tires	8-14 ply
Size	10.00 x 15
Pressure:	
Highway (Front)	40 psi
Highway (Rear)	70 psi
Cross-country (Front)	25 psi
Cross-country (Rear)	45 psi
Brake system	air-over-hydraulic
Parking brake	Rear Dolly, Manual
Jack assembly	Mechanical, Telescoping
Power source:	
Towing vehicle electric system	24 volt dc
Accessory electric system:	
Voltage	120 volt ac
Frequency	60 cps
Power	3 kw
Source	engine-driven generator set
Angle of departure	20 degrees
Maximum grade	40 degrees

*Dimensions exceed the limitations permitted under AR 700-105.

PERFORMANCE

Maximum towing speed:	
Highway	50 mph
Cross-country	5 mph
Fording depth	

EQUIPMENT

Basic Issue Items: See TM 9-2330-255-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 trailer per flat car.

Length	549 13/16 in.
Width	103 in.
Height	60⅛ in.
Volume	1343 cu ft
Area	285 sq ft
Gross weight	
Ship tons	33

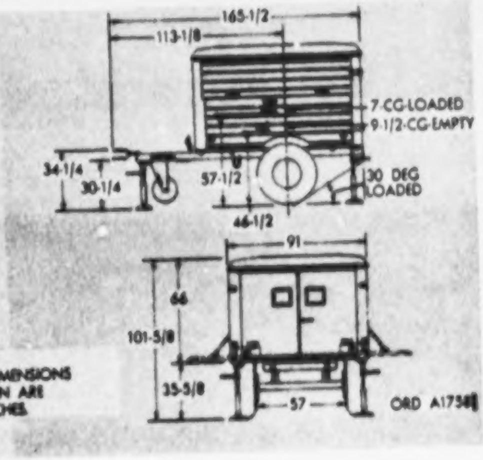
Outside Continental United States

Shipped 1 trailer per flat car.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-223-20P, TM 9-2330-255-14, TM 9-2330-255-24P.

TRAILER, VAN: SHOP, FOLDING SIDE, 1½-TON, 2-WHEEL, M448



Major item

Model	*Line item No.*	*Federal stock No.*
M448		2330-631-5692

General

TRAILER, VAN: shop, folding side, 1½-ton, 2-wheel, M448, is designed to provide a mobile trailer van shop with folding sides. It is a component of various aircraft maintenance shops, for use on highway or cross-country. It is composed of an aluminum body, which is mounted on and is removable from CHASSIS, TRAILER: 1½-ton, 2-wheel, M103A2.* Rear doors are practically full width and height of body, side shelf-type doors are practically full length of body. Stabilizing jacks are provided for use at each rear corner and at the front near the lunette. A drawbar assembly is attached to the front of the chassis, provided with a lunette with nonrotating, invertible offset shank, and landing gear composed of caster-type landing wheel to support drawbar and permit movement of trailer when uncoupled from truck. The van trailer M448 is towed by TRUCK, CARGO: 2½-ton, 6x6, M35.**

Differences among models

Data plate location

Classification: Standard A (OTCM 36876).

CHARACTERISTICS

Type	trailer van body
Manufacturer	Boyertown Auto Body Works
Weight:	2,960 lb
Net	
Payload:	3,000 lb
Cross-country	4,500 lb
Highway	
Gross:	5,960 lb
Cross-country	7,460 lb
Highway	
Weight distribution:	
Coupled to truck:	
No load:	252 lb
Lunette eye	2,708 lb
Axle	
Cross-country:	591 lb
Lunette eye	5,369 lb
Axle	
Highway:	465 lb
Lunette eye	6,995 lb
Axle	
On landing gear:	
No load:	335 lb
Landing gear	2,625 lb
Axle	
Cross-country:	520 lb
Landing gear	5,440 lb
Axle	
Highway:	615 lb
Landing gear	6,845 lb
Axle	
Speed:	35 mph
Cross-country	55 mph
Highway	165½ in.
Length	91 in.
Width	101⅝ in.
Height	
Ground clearance (with gear retracted)	67⅝ in.
Tread	
Landing gear:	
Manufacturer	collapsible and adjustable
Type	pressed steel
Wheels, type	
Tires:	2
Number	9:00 x 20
Size	cross-country, nondirectional
Design	8
Number of plies	military, pneumatic
Type	
Pressure:	70 psi
Highway	50 psi
Cross-country	psi
Sand	
Brakes:	mechanical
Parking	
Service:	air-over-hydraulic
Actuation	Wagner Electric Co.
Make	

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*For characteristics and data, see item on page 22-18.

**For characteristics and data, see item in section 21.

Size:	
Diameter	15 in.
Width	8 in.
Operating air pressure	100 lb
Towing facilities	lunette
Lunette height from ground:	
Minimum	30⅛ in.
Maximum	34⅛ in.
Departure angle	30 deg
Performing temperatures:	
Maximum	
Minimum	
Heaters:	
Number	none
Make	
Model	
Output	BTU/hr
Tempera'ure rise (air)	°F.
Electrical system:	
External lights:	
Right	Blackout service, tail and stoplight, blackout stoplight
Left	Blackout, service, tail and stoplight
Potential	24 volts
Internal lights and power	110-115 ac 3-phase
Power source	external

PERFORMANCE

Towing speed (recommended):	
Highways and improved roads	55 mph
Unimproved roads and trails	mph
Sand	
Fording depth	35 in.

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

PRIME MOVER

TRUCK, CARGO: 2½-ton, 6x6, M35**

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 van trailer, uncrated

Length	165⅛ in.
Width	91 in.
Height	101⅝ ft
Volume	863 cu ft
Area	104 sq ft
Gross weight	2960 lb
Ship tons	21.58

Outside Continental United States

Shipped 1 van trailer, uncrated

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Reference: TM 9-2300-223-20P.

**For characteristics and data, see item in section 21.

**For characteristics and data, see item in section 21.

SECTION 23

TANKS AND SELF-PROPELLED WEAPONS

(Class 2350)

(Includes self-propelled guns, howitzers, mortar,
and rifles; combat tanks)

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GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin 40-mm, M42 and M42A1 23-2
GUN, ANTITANK, SELF-PROPELLED: 90-mm, M56 23-6
GUN, FIELD ARTILLERY, SELF-PROPELLED: 155-mm, M53 (T97) 23-8
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HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 (T236E1) (See page 23-39)
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TANK, COMBAT, FULL TRACKED: 90-mm gun, M48 and M48C 23-26
TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1 23-28
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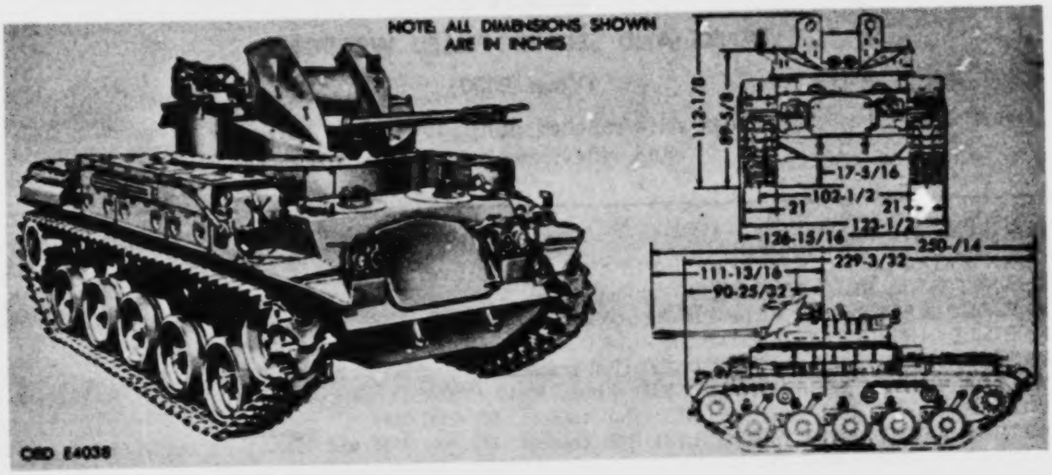
TANK, COMBAT, FULL TRACKED: 105-mm gun, M60 23-32
TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 and M103A1 23-34
TANK, COMBAT, FULL TRACKED: flamethrower, M67 and M67A1 (See page 23-45)

GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: TWIN 40-MM, M42 AND M42A1



Major item

Model	*Line item No.*	*Federal stock No.*
M42, w/e	4-17224-30	2350-796-8000
M42A1, w/e	4-17224-40	2350-049-4791

General

GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin 40-mm, M42 and M42A1, is full-track-laying, rear engine mounted, armored vehicle, capable of operating in temperatures ranging from —65° to +120° F. Both vehicles are designed for deployment with armored divisions as a means of providing mobile antiaircraft weapons, but because of their rapid rate of fire, they have proven to be valuable infantry support weapons against ground targets. Both vehicles are powered by supercharged, air cooled engines, with power being transmitted to the final drives through cross-drive transmissions.

Both vehicles incorporate a suspension system of sprung road wheels, wheel supporting arms, shock absorbers, springs, compensating wheels, and tracks.

The interior of the vehicles are divided into three distinct areas; the driving compartment located at the front, has seats for the driver, and commander radio-operator and houses all the driving controls and instruments, the stowage compartment, located in the center, serves as a base for the MOUNT, GUN: 40-mm twin, M4,* the engine compartment, located at the rear, houses the main engine, auxiliary generator and engine, transmission, and fuel tank.

Differences among models

The M42A1 is similar to the M42 in appearance, the difference being in the fuel injection system utilized on the engine of the M42A1.

Data plate location

The data plate is located on the hull wall, to the left of the driver's seat.

Classification

M42	Standard B (OTCM 36841)
M42A1	Standard A (OTCM 36841)

CHARACTERISTICS

Crew	6
Length, overall	250¼ in.
Length of vehicle	$229\frac{3}{32}$ in.
Width, overall	$126\frac{15}{16}$ in.
Height, overall	112⅛ in.
Armament:	
CANNON, 40 MILLIMETER DUAL AUTOMATIC GUN: M2A1	1
MOUNT, GUN: 40-mm, twin, M4	1
MACHINE GUN, CALIBER .30: Browning, M1919A4, flexible	1
Tracks, width	21 in.
Center of front road wheel to center of rear road wheel	
Tread (center to center of track)	102½ in.
Outside to outside of track	123½ in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	49,500 lb
Empty	
Length of track on ground	
Ground contact area—O-inch penetration	
Ground clearance	$17\frac{11}{16}$ in.
Ground pressure	9.3 psi
Pintle height, loaded	
Vehicle, above ground	$17\frac{5}{16}$ in.
Front of vehicle to center of turret	$90\frac{25}{32}$ in.
Front of gun to center of turret	$111\frac{13}{16}$ in.
Electrical system:	
No. of volts	24
No. of batteries	4 (12 volts)
Type of batteries	6TN
Fuel octane rating	80
Capacities:	
Fuel (total)	140 gal
Crankcase, refill (without cooler and lines)	44 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	44 qt
Final drive	
Brakes:	
Type	wet multiple disk
Operation	mechanical
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-500-3
Type	Cross-drive
No. of ranges:	
Forward	2
Reverse	1

*For characteristics and data, see item in section 3.

CHARACTERISTICS—Continued

Transmission—Continued	
Ratio from torque converter output shaft to final drive flange:	
High	1.4:1
Low	5.34:1
Final reduction	4.25:1
Differential-drive gear ratio	
Engine:	
Manufacturer	Continental or Lycoming
Model:	
M42	AOS-895-3
M42A1	AOSI-895-5
Type	Horizontally opposed. air-cooled. supercharged
Displacement	895.9 cu in.
No. of cylinders	6
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	5.5:1
Max governed speed (full load)	2.800 rpm
Brake horsepower. gross (max w/std accessories)	500 at 2.800 rpm
Torque. gross (max w/std accessories)	955 ft-lb at 2.400 rpm
Type of ignition. magneto	2
Auxiliary engine-generator:	
Manufacturer	General Motors Corp
Model	A41-1 or A41-2

AMMUNITION

40-mm	480 rounds
Cal .30	1.750 rounds
Hand grenades	8
Rockets	4

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
Wo/deep-water fording kit	40 in.
W/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	28 in.
Maximum width of ditch vehicle can cross	72 in.
Fuel consumption (average conditions)	0.7 mpg
Allowable speed. recommended	45 mph
Maximum allowable towed load. gross	5.000 lb
Cruising range avera?e (average conditions)	100 mi

** For characteristics and data. see item in sections 12. 14. 18. and 27.

EQUIPMENT

Communication:

Radio set	AN/VRC-8. 9 or 10. or AN/VRC-46 and AN/GRR-5
Intercommunication set	AN/UIC-1

Sighting and fire control:*

PERISCOPE: M13 and M19

QUADRANT. FIRE CONTROL: elevation. M1

SIGHT. COMPUTING: M38 (T134)

SIGHT. REFLEX: M24C

Basic Issue Items: See TM 9-7218.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length:	
M42	248⅝ in.
M42A1	244 in.
Width	129 in.
Height:	
M42	111⅝ in.
M42A1	112 in.
Volume	2.028 cu ft
Area	218 sq ft
Gross weight	44.800 lb
Ship tons	50.57

Outside Continental United States

Shipped	
Length:	
M42	
M42A1	
Width	
Height:	
M42	
M42A1	
Volume	
Area	
Gross weight	
Ship tons	

References: TB 9-7218-1. TM 9-7218. TM 9-2350-202-20P.

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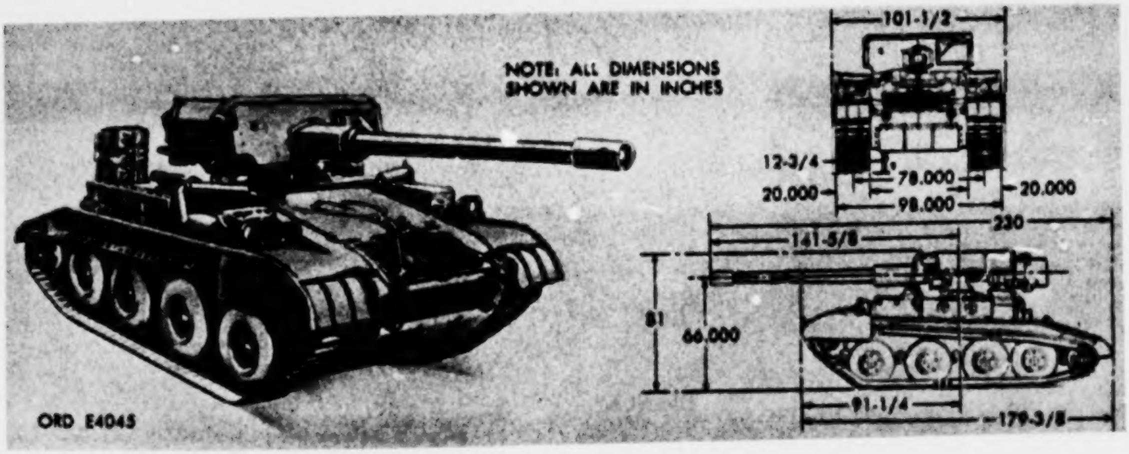
GUN, ANTITANK, SELF-PROPELLED: 90-MM, M56



Major item

Model	*Line item No.*	*Federal stock No.*
M56, w/e	4-17220-00	2350-508-1000

General

GUN, ANTITANK, SELF-PROPELLED: 90-mm, M56, is a highly maneuverable, light weight, full track, front drive combat vehicle, with a forward mounted air cooled, fuel injection engine. Power is transmitted to the final drives through a cross-drive transmission. The vehicle is used in airborne operations. The vehicle chassis is made of aluminum and is unarmored. The gun assembly is protected by an armored shield. The vehicles, light weight enables it to be transported in a heavy assault glider or cargo aircraft and to be air-dropped.

The vehicle is supported by coil springs, eight road wheels, fitted with pneumatic tires and 20-inch unconventional tracks, consisting of two rubber fabric and steel cables of equal width. Torsion bars and shock absorbers are also provided.

The vehicle hull is composed of two major compartments: forward and rear. The forward compartment is enclosed and houses the power plant and engine accessories. The rear compartment is open and houses the fuel tank, top carriage, CANNON, 90-MILLIMETER GUN: M54; MOUNT, 90-mm, M88,* driver's instrument panel, and vehicle controls and seats the crew.

Differences among models

Data plate location

The data plate is located in the driver's compartment.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Crew	4
Length, overall	230 in.
Length of vehicle	179⅜ in.
Width, overall	101½ in.
Height, overall	81 in.
Armament:	
CANNON, 90 MILLIMETER GUN: M54; MOUNT GUN: 90-mm, M88	1
CARBINE, CALIBER .30: M2	4
Tracks, width	20 in.
Tread (center to center of track)	78 in.
Outside to outside of track	98 in.
Angle of approach	
Angle of departure	
Type of fuel	gasoline
Center of gravity above ground	26 in.
Weight of vehicle:	
Crew and equipment	15,500 lb
Empty	12,750 lb
Length of track on ground	
Ground contact area—0-inch penetration	
Ground clearance	15 in.
Ground pressure	4.5 psi
Pintle height, loaded	
Height of gun	66 in.
Front of vehicle to center of vehicle	91¼ in.
Front of gun to center of vehicle	141⅝ in.
Electrical system:	
Volts	24
Number of batteries	2 (12 volts)
Type of batteries	2 HN or 6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	55 gal
Crankcase, refill (without cooler, cores, and lines)	11 qt
Transmission, cross drive refill (without cooler, cores and lines)	15 qt
Final drive, each	
Brakes:	
Type	wet, multiple disk
Operation	mechanical, foot pedal
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-150-4
Type	Cross-drive, torque converter
Number of ranges:	
Forward	2
Reverse	1
Final reduction	4.8:1
Differential-drive gear ratio	
Engine:	
Manufacturer	Continental
Model	A01-402-5
Type	air-cooled, opposed, fuel injection
Displacement	402 cu in.
No. of cylinders	6
Bore	4.625 in.
Stroke	4.000 in.
Compression ratio	6.9:1

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* For characteristics and data, see item in section 4.

CHARACTERISTICS—Continued

Engine—Continued

Maximum governed speed (full load)	28 mph
Brake horsepower, gross (mas w/std accessories)	200 at 3,000 rpm
Torque gross (max w/std accessories)	355 ft-lb at 2,750 rpm
Type of ignition	magnets
Elevating and traversing mechanism	manual

AMMUNITION

	29 rounds
90-MM	240 rounds
Cal .30	8
Grenades	

PERFORMANCE

	60 percent
Maximum grade ability	9 ft
Turning radius	
Fording depth:	42 in.
Wo/deep-water fording kit	60 in.
W/deep-water fording kit	30 in.
Maximum vertical obstacle vehicle can climb	48 in.
Maximum width of ditch vehicle can cross	2.5 gpm
Fuel consumption (average conditions)	28 mph
Allowable speed recommended	140 mi
Cruising range (average conditions)	
Maximum allowable towed load, gross	

EQUIPMENT

Communications:	
Transradio set AN/PRC-10	AN/PRC-10
Amplifier and power supply AM-598/U	AM-598/U

Sighting and Fire Control:*
MOUNT, TELESCOPE: M111(T219)
QUADRANT FIRE CONTROL: M1A1
TELESCOPE: M104(T186)
FUZE SETTER: M27(T40)

Basic Issue Items: See TM 9-2350-213-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1	241 in.
Length	88 in.
Width	88 in.
Height	1,077 cu ft
Volume	12,500 lb
Gross weight	26.42
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-2350-213-10, TM 9-2350-213-20P, TM 9-2350-213-20, TM 9-2350-213-35, TM 9-2350-213-35P.

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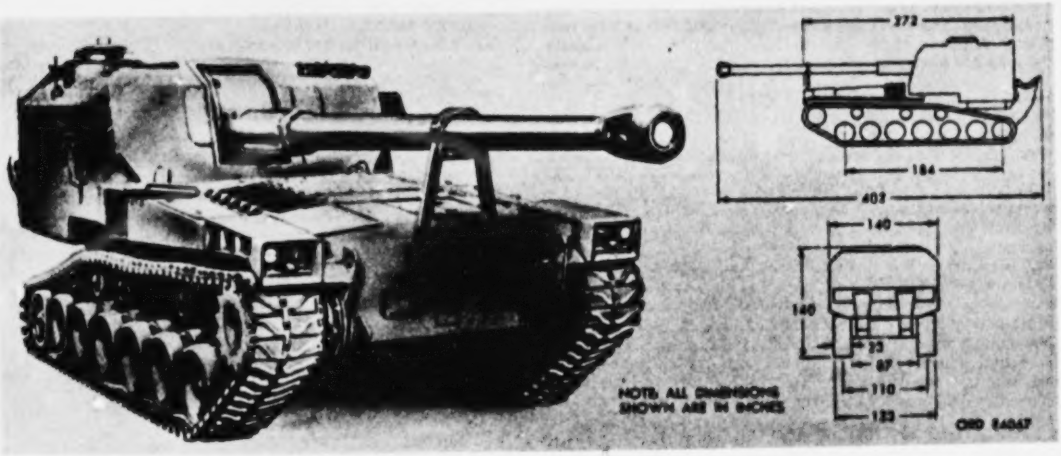
* For characteristics and data, see item in sections 14 and 18.

GUN, FIELD ARTILLERY, SELF-PROPELLED: 155-MM, M53(T97)



Major item

Model	*Line item No.*	*Federal stock No.*
M53(T97), w/e	4-17222-20	2350-739-3840

General

GUN, FIELD ARTILLERY, SELF-PROPELLED: 155-mm, M53 (T97), is a lightly-armored front sprocket driven full-tracked-laying vehicle. The M53 provides mobility for the 155-mm gun, which is inclosed in an armored cab, and crew protection in offensive combat. The vehicle is powered by a 90-degree V-type, air-cooled engine. Power is transmitted to the final drives through a cross-drive transmission, which is combined with the differential and steering unit.

The vehicle utilizes the torsion-bar suspension system incorporating seven road wheels on each side, shock absorbers, track support rollers, and tracks. Trailing idler wheels, mounted on eccentric shafts maintained constant tension on the tracks when the vehicle is in motion.

The vehicle hull is a welded steel structure divided into four compartments; engine, fuel tank, turret support, and stowage The engine compartment is decked over to provide protection against enemy fire and other elements. The turret, mounted in the turret support compartment, houses the combination MOUNT, GUN: 155-mm, M86,* which supports the CANNON, 155 MILLIMETER GUN: M46*. A gas-hydraulic equilibration system simultaneously balances the gun and turret.

Differences among models

Data plate location

The data plate is located on the turret front wall above and to the right of the driver's seat.

Classification: Standard B (OTCM 36841)

CHARACTERISTICS

Crew	6
Length, overall	402 in.
Length of vehicle	272 in.
Width, overall	141 in.
Height, overall	140 in.
Armament:	
CANNON, 155 MILLIMETER GUN: M46; MOUNT, GUN: 155-mm, M86	1
MACHINE GUN, CALIBER .50: Browning, M2, heavy barrel, flexible	1
Tracks, width	23 in.
Center of front road wheel to center of rear road wheel	184 in.
Thread (center to center of track)	110 in.
Outside to outside of track	133 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	96,000 lb
Empty	
Length of track on ground	
Ground contact area—0-inch penetration	
Ground clearance	18½ in.
Ground pressure	11.2 psi
Pintle height (loaded)	25 in.
Height of gun	
Front of vehicle to center of vehicle	
Front of gun to center of vehicle	
Electrical system:	
Volts	24
No. of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	380 gal
Crankcase refill (including cooler, cores and lines)	104 qt
Transmission, cross-drive, refill (including cooler, cores, and lines)	96 qt
Final drive, each	5 qt
Brakes:	
Service:	
Type	wet friction
Operation	hydraulic cylinders
Parking:	
Type	wet friction disk
Operation	mechanical
Transmission:	
Manufacturer	General Motors Corp
Model	CD-850-4, 4A or 4B
Type	Cross-drive
No. of ranges:	
Forward	2
Reverse	1
Final reduction	5.0769:1
Differential-drive gear ratio	

---

* For characteristics and data, see item in section 4.

CHARACTERISTICS—Continued

Engine: ....Continental
  Manufacturer....................AV-1790-5B, 5C, or 5D
  Model....................90-degree, V-type, air-cooled
  Type....................1791.75 cu in.
  Displacement....................12
  No. of cylinders....................5.75 in.
  Bore....................5.75 in.
  Stroke....................6.5:1
  Compression ratio....................2,800 rpm
  Max governed speed (full load)....................704 at 2,800 rpm
  Brake horsepower, gross (max w/std accessories)....1,440 ft-lb at 2,000 rpm
  Torque, gross (max w/std accessories)........magneto (2)
  Type of ignition....................T84E1
Track rubber (interchangeable)....................T80E6
Track steel....................
Auxiliary engine, generator: ....General Motors Corp
  Manufacturer....................A4-1
  Model....................

AMMUNITION

....................20 rounds
155-mm....................900 rounds
Cal .50....................180 rounds
Cal .45....................900 rounds
Cal .30....................

PERFORMANCE

....................60 percent
Maximum grade ability....................pivot
Turning radius....................
Fording depth: ....46 in.
  wo/deep-water fording kit....................
  w/deep-water fording kit....................
Maximum vertical obstacle vehicle can climb....................40 in.
Maximum width of ditch vehicle can cross....................89 in.
Fuel consumption (average conditions)....................0.43 mpg
Allowable speed, recommended....................30 mph
Maximum allowable towed load, gross....................5,000 lb
Cruising range (average conditions)....................160 mi

EQUIPMENT

Communications:
  Radio set......AN/VRC 8, 9, or 10: AN/VRC-46; or AN/PRC-9 or 25
  Intercommunications set....................AN/UIC-1

Sighting and Fire Control:*
  BINOCULAR: M17A1
  INDICATOR, AZIMUTH: T27
  FUZE SETTER: M26 or M27
  FUZE SETTER: M28
  MOUNT, TELESCOPE: M99A1C (T179E5)
  MOUNT, TELESCOPE: M101 (T181)
  PERISCOPE: M17, M15A1, and M13
  POST, AIMING: M1A2
  QUADRANT, FIRE CONTROL: gunner's, M1 or M1A1, w/CASE, carrying
  TELESCOPE: M99 (T159)
  TELESCOPE, PANORAMIC: M100 (T149E1)
  TRIPOD, SERVEYING: 6675-240-1881 (issued w/POST, AIMING: M1 series when issued for Arctic use) (issued by Corps of Engineers)
Basic Issue Items: See ORD 7 SNL G-259.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped ....326 in.
  Length....................140 in.
  Width....................117 in.
  Height....................3,075 cu ft
  Volume....................93,000 lb
  Gross weight....................76.87
  Ship tons....................315 sq ft
  Area....................

Outside Continental United States

Shipped
  Length....................
  Width....................
  Height....................
  Volume....................
  Gross weight....................
  Ship tons....................

References: SNL G-259, TM 9-2350-210-12, TM 9-2350-210-20P, TM 9-7213.

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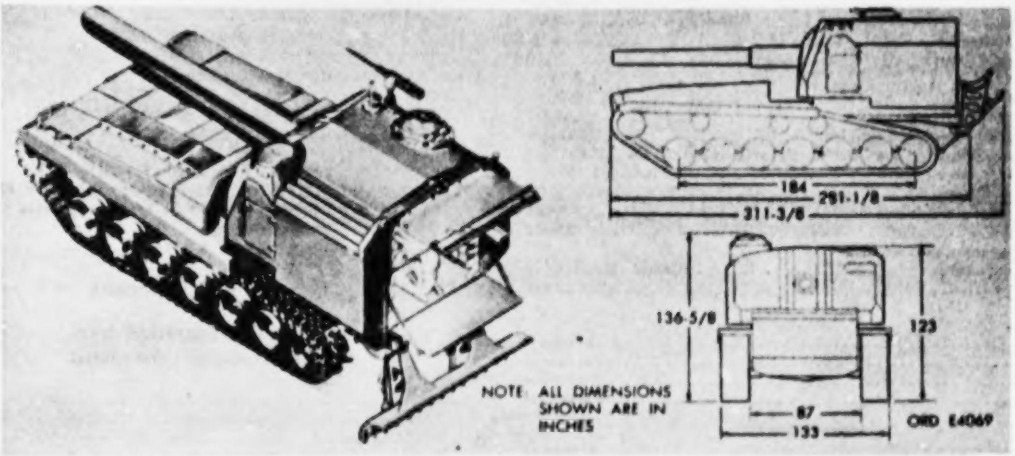
* For characteristics and data, see item in sections 14, 18, and 27.

HOWITZER, HEAVY, SELF-PROPELLED: FULL TRACKED, 8-INCH M55 (T108)



Major item

Model	*Line item No.*	*Federal stock No.*
M55, w/e	4-18417-20	2350-739-3841

General

HOWITZER, HEAVY, SELF-PROPELLED, FULL TRACKED: 8-inch, M55(T108), is a lightly armored, front sprocket-driven, full-track-laying vehicle. The M55 provides mobility for the 8-inch howitzer and crew protection in offensive combat. The vehicle is powered by a 90-degree, V-type, air-cooled engine. Power is transmitted to the final drives through a cross-drive transmission, which is a combined transmission, differential, and steering unit.

The vehicle utilizes the torsion bar suspension system, incorporating seven individually sprung road wheels on each side, shock absorbers, track support rollers, and tracks. Trailer idler wheels, mounted on eccentric shafts, maintain constant tension on the tracks when the vehicle is in motion.

The vehicle hull is divided into four compartments: engine, fuel tank, turret support, and stowage. The engine compartment is decked over to provide protection against enemy fire and other elements. The turret support compartment mounts the turret, which houses the CANNON, 8-INCH HOWITZER: M47: MOUNT, GUN: 8-inch howitzer, M86*. The turret also houses the driving controls.

Differences among models

Data plate location

The data plate is located on the turret front wall, above and to the left of the driver's seat.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Crew	6
Length, overall	311⅜ in.
Length of vehicle	281⅛ in.
Width, overall	141 in.
Height, overall	146 in.
Ground to top of commanders cupola	136⅝ in.
Ground to top of turret	123 in.
Armament:	
CANNON, 8-INCH HOWITZER: M47; MOUNT, GUN: 8-inch howitzer, M86	1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible	1
SUBMACHINE GUN, CALIBER .45: M3A1	1
CARBINE, CALIBER .30: M2	5
Tracks, width	23 in.
Center of front road wheel to center of rear road wheel	184 in.
Tread (center-to-center of track)	110 in.
Outside to outside of track	133 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	98,000 lb
Empty	90,000 lb
Length of track on ground	184 in.
Ground contact area—0-inch penetration	
Ground clearance	18⅛ in.
Ground pressure	11.2 psi
Pintle height (loaded)	25 in.
Height of howitzer	
Front of vehicle to center of turret	106⅞ in.
Front of howitzer to center of turret	193⅛ in.
Electrical system:	
Number of volts	24
Number of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	380 gal
Crankcase, refill (without cooler, cores and lines)	64 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	72 qt
Final drive each	5 qt
Brakes:	
Type	wet friction disk
Operation	hydraulic cylinders
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-850-4, 4A, or 4B
Type	cross-drive
No. of ranges:	
Forward	2
Reverse	1
Final reduction	5.0769:1
Differential-drive gear ratio	

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* For characteristics and data, see item in section 6.

CHARACTERISTICS—Continued

Engine:

Manufacturer	Continental
Model	AV-1790-5B, 5C, or 5D
Type	90-degree, V-type, air-cooled
Displacement	1791.5 cu in.
No. cylinders	12
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	6.5:1
Brake horsepower, gross (max w/std accessories)	704 at 2,800 rpm
Torque, gross (max w/std accessories)	1,440 ft-lb at 2,000 rpm
Type of ignition	magneto (2)
Auxiliary engine-generator GMC—Model	A41-1
Elevating mechanism	manual and hydraulic
Tracks, steel	T80E6
Tracks, rubber (interchangeable)	T84E1

AMMUNITION

8-inch	10 rounds
Cal .50	900 rounds
Cal .45	180 rounds
Cal .30	900 rounds
Hand grenades	8

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
wo/deep-water fording kit	48 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	40 in.
Maximum width of ditch vehicle can cross	69 in.
Fuel consumption (average conditions)	0.43 mpg
Allowable speed recommended	30 mph
Maximum allowable towed load, gross	5,000 lb
Cruising range (average conditions)	160 mi

EQUIPMENT

Communications:

Radio set	AN/PRC-9 or 25 and AM-598/U
Intercommunications set	AN/UIC-1

Sighting and Fire Control:*
- BINOCULAR: M17A1
- INDICATOR, AZIMUTH: T27
- FUZE, SETTER: M26 AND M27
- FUZE SETTER: M28
- MOUNT, TELESCOPE: M99A1C (T179E5)
- MOUNT, TELESCOPE: M101 (T181)
- PERISCOPE: M17, M15A1 and M13
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: gunner's M1 or M1A1, w/CASE, carrying
- TELESCOPE PANORAMIC: M100
- TELESCOPE: M99 (T159E1)
- TRIPOD, SURVEYING: 6675-240-1881 (issued w/POST, AIMING: M1 series when issued for Arctic use) (issued by Corps of Engineers).

INSTRUCTIONAL MATERIAL

Basic Issue Items:

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1

Length	325 in.
Width	140 in.
Height	117 in.
Volume	3,075 cu ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL G-259, TM 9-7218, TM 9-2350-210-12, TM 9-2350-210-20P.

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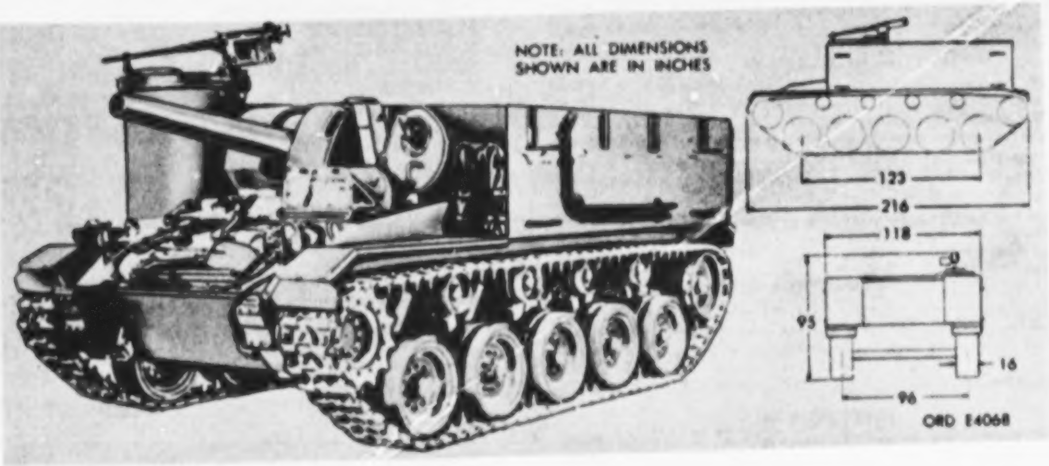
* For characteristics and data, see item in sections 14, 18, and 27.

HOWITZER, LIGHT, SELF-PROPELLED: FULL TRACKED, 105-MM, M37



Major item

Model	***Line item No.***	***Federal stock No.***
M37, w/e	4-18420-30	2350-835-8067

General

HOWITZER, LIGHT, SELF-PROPELLED: full tracked, 105-mm, M37, is a full-tracked, self-propelled, armored vehicle. The M37 provides mobility for the 105-mm howitzer and crew protection in offensive combat. The howitzer assembly is protected by square box-like armor mounted to the rear of the hull. The M37 is constructed on a light tank M24 chassis. The vehicle is powered by two 90-degree, V-type, liquid-cooled engines. Power is transmitted to the final drives through two hydramatic transmissions.

The vehicle utilizes the torsion bar suspension system, incorporating road wheels, track support rollers, shock absorbers, and tracks. Track wheels and suspension arm cushion stops are also provided.

The vehicle is designed with three compartments. They are: The driving compartment at the front, fighting compartment in the center, and engine compartment at the rear. The 105-mm howitzer cannon* is mounted in the fighting compartment. Additional firing support is provided by a machinegun mounted on a fixed turret located on the right front corner of the hull adjacent to the assistant driver's hatch.

Differences among models

Data plate location

The data plate is located on the left front hull wall, in the driver's compartment.

Classification: Limited standqrd (OTCM 37119)

CHARACTERISTICS

Crew	7
Length, overall	216 in.
Length of vehicle	216 in.
Width, overall	118 in.
Height, overall	95 in.
Center of front road wheel to center of rear road wheel	123 in.
Armament:	
Howitzer, 105-mm	1
MACHINE GUN, CALIBER .50:	1
CARBINE, CALIBER .30: M1	1
Tracks, width	16 in.
Tread (center to center of track)	96 in.
Outside to outside of track	112 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	46,000 lb
Empty	
Length of track on ground	
Ground contact area—0-inch penetration	
Ground clearance	18⅜ in.
Ground pressure	11.7 psi
Pintle height (loaded)	
Height of howitzer	
Front of vehicle to center of turret	
Front of howitzer to center of turret	
Electrical system:	
No. of volts	24
No. of batteries	4
Type of batteries	2-H
Fuel octane rating	70
Capacities:	
Fuel (total)	110 gal
Crankcase, refill (each engine)	8 qt
Transmission (each)	15 qt
Final drive (each)	2 qt
Brakes:	
Type	controlled differential
Operation	mechanical
Transmission (two used):	
Manufacturer	General Motors Corp
Model	hydromatic
Type	
No. of ranges:	
Forward	2
Reverse	1
Final reduction	2.94:1
Differential-drive gear ratio	
Engine (two used):	
Manufacturer	Cadillac
Model	44T24
Type	90-degree, V-type, liquid-cooled
Displacement	349 cu in.
No. of cylinders	8
Bore	3½ in.
Stroke	4½ in.
Compression ratio	7.06:1
Maximum governed speed (full load)	
Brake horsepower, gross (max w/std accessories)	110 at 3,400 rpm
Torque, gross (max w/std accessories)	240 ft-lb at 1,200 rpm
Type of ignition	battery-distributor

---

* For characteristics and data, see item in section 4.

AMMUNITION

105-mm	26 rounds
Cal .50	990 rounds
Cal .30	750 rounds
Hand grenades	8

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
wo/deep-water fording kit	42 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	108 in.
Fuel consumption (average conditions)	9 mpg
Allowable speed, recommended	30 mph
Maximum allowable towed load, gross	10,000 lb
Cruising range (average conditions)	100 mi

EQUIPMENT

Communications:	
Radio set	AN/PRC-9 or AN/PRC-25
Intercommunication set	AN/UIC-1

Sighting and Fire Control:*
- FUZE SETTER: M26 and M28
- MOUNT, TELESCOPE: M76
- MOUNT, TELESCOPE: M77
- PERISCOPE: M13 or M6
- POST AIMING: M1A2
- QUADRANT, FIRE CONTROL: elevation, M12
- QUADRANT, FIRE CONTROL: gunner's, M1 or M1A1, w/CASE, carrying
- TELESCOPE, PANORAMIC: M12 or M12A2
- TELESCOPE: M76G
- TRIPOD, SURVEYING: 6675-240-1881 (issued w/ POST, AIMING: M1 series when issued for Arctic use) (issued by Corps of Engineers)

Basic Issue Items: See ORD 7 SNL G-238.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 per	
Length	230 in.
Width	112 in.
Height	96 in.
Volume	1,424 cu ft
Gross weight	37,066 lb
Ship tons	
Area	

Outside Continental United States

Shipped 1 per	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Area	

References: SNL G-238, TM 9-717.

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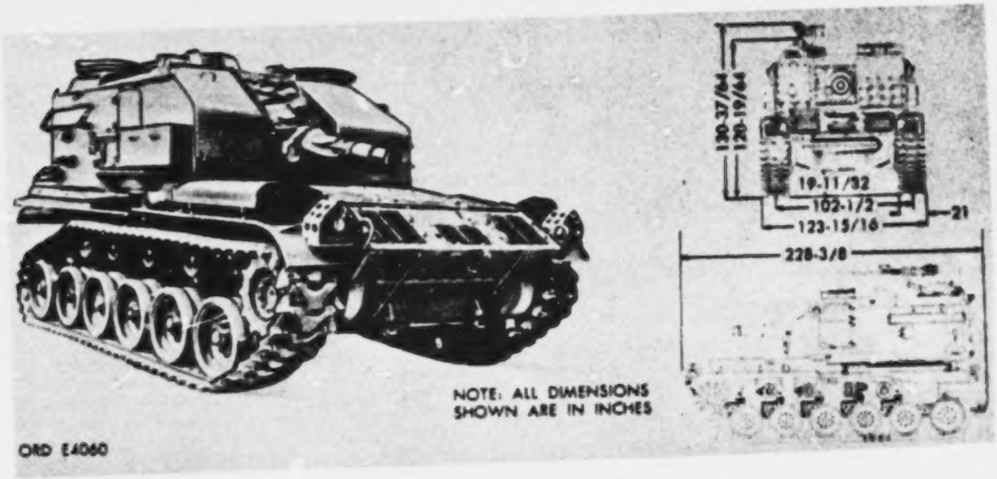
* For characteristics and data, see item in section 14, 18 and 27.

HOWITZER, LIGHT, SELF-PROPELLED: FULL TRACKED, 105-MM, M52 AND M52A1



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

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Major item

Model	*Line item No.*	*Federal stock No.*
M52, w/e	4-18420-40	2350-733-3216
M52A1, w/e	4-18420-50	2350-563-7967

General

HOWITZER, LIGHT, SELF-PROPELLED: full tracked, 105-mm, M52 and M52A1, is a lightly armored full-track-laying vehicle, designed to provide highly mobile and maneuverable 105-mm howitzer to give close support to both rapidly moving armored columns and standard infantry divisions. An armored cab incloses the howitzer assembly and crew. The vehicle may be identified by its high silhouette. The vehicles are powered by opposed cylinder, supercharged, air-cooled engine, with power being transmitted to the final drives through cross-drive transmissions. The transmissions are combined with the differential and steering units.

The vehicles are equipped with torsion bar suspension incorporating six road wheels on each side, with the rear wheels acting as track idlers. Tracks, track support rollers, bumper springs, and shock absorbers are also provided.

The hull of both vehicles is divided into two compartments; the power plant, located at the front, and the crew, located at the rear. The turret, mounted over the crew compartment, houses the MOUNT, HOWITZER: 105-mm, M85 (T67E1)* which supports the CANNON, 105 MILLIMETER HOWITZER: M49.*

Differences among models

The M52A1 is similar in appearance to the M52. The difference being the modification of the M52 so that a fuel injection engine can be utilized in the M52A1.

Data plate location

The data plate is located on the turret wall, in the driver's compartment, directly in front of the driver.

Classification

Standard B (OTCM 36841)
M52.......Standard A (OTCM 36841)
M52A1.......

CHARACTERISTICS

.......5
Crew....... 228⅜ in.
Length, overall.......228⅜ in.
Length of vehicle.......$123\frac{15}{16}$ in.
Width, overall.......$130\frac{37}{64}$ in.
Height, overall.......$120\frac{19}{64}$ in.
Height (ground to machine gun mount).......

Armament:.......1
Howitzer, 105-mm, M49.......1
MACHINEGUN, CALIBER .50: M2.......4
CARBINE, CALIBER .30: M2.......1
SUBMACHINEGUN, CALIBER .45: M3A1.......102½ in.
Tread (center to center of track).......$123\frac{15}{16}$ in.
Outside to outside of track.......
Angle of approach.......
Angle of departure.......
Type of fuel.......
Center of gravity above ground.......
Weight of vehicle:.......53,000 lb
Crew and equipment.......49,800 lb
Empty.......149½ in.
Length of track on ground.......
Ground contact area—0-inch penetration.......$19\frac{11}{32}$ in.
Ground clearance.......8.5 psi
Ground pressure.......
Pintle height (loaded).......
Height of howitzer.......
Front of vehicle to center of vehicle.......
Front of howitzer to center of vehicle.......
Electrical system:.......24
No. of volts.......4
No. of batteries.......6 TN
Type of batteries.......80
Fuel octane rating.......
Capacities:.......179 gal
Fuel (total).......44 qt
Crankcase, refill (without cooler, cores, and lines).......
Transmission, cross-drive, refill (without cooler, cores, and.......44 qt
lines).......5 qt
Final drive.......
Brakes:.......wet, multiple disk
Type.......
Operation.......
Transmission:.......General Motors Corp (Allison Div)
Manufacturer.......CD-500-3
Model.......cross-drive
Type.......
No. of ranges:
Forward.......
Reverse.......4.75:1
Final reduction.......
Differential-drive gear ratio.......

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* For characteristics and data, see item in section 4.

CHARACTERISTICS—Continued

Engine:	
Manufacturer	Continental
Model:	
M52	AOS–895–3
M52A1	AOSI–895–5
Type	opposed, air-cooled
Displacement	895 cu in.
No. of cylinders	6
Bore	5¾ in.
Stroke	5¾ in.
Compression ratio	5.5:1
Maximum governed speed (full load)	2,850 rpm
Brake horsepower, gross (max w/std accessories)	500 at 2,800 rpm
Torque, gross (max w/std accessories)	975 ft-lb at 2,400 rpm
Type of ignition	magneto
Auxiliary engine	GMC Model A41–1
Traversing and Elevating mechanism	manual

AMMUNITION

105-mm	105 rounds
Cal .50	900 rounds
Cal .45	180 rounds
Cal .30	720 rounds
Grenades	8

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
wo/deep-water fording kit	48 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	72 in.
Fuel consumption (average conditions)	⅓ mpg
Allowable speed recommended:	
M52	35 mph
M52A1	42 mph
Maximum allowable towed load, gross	
Cruising range (average conditions)	100 mi

EQUIPMENT

Communications:	
Radio set	AN/PRC-8, 9, 10, or 25
Intercommunication set	AN/UIC-1

Sighting and Fire Control:*

- FUZE SETTER: M26 and M28
- MOUNT, TELESCOPE: M99A1 (T179E4)
- MOUNT, TELESCOPE: M100 (T169E1)
- PERISCOPE: M13, M15A1, M23 (T38), and M17
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: gunner's, M1 or M1A1, w/CASE, carrying
- TELESCOPE: M100 and M101
- TRIPOD, SURVEYING: 6625-240-1881 (issued w/ POST, AIMING: M1 series when issued for Arctic use) (issued by Corps of Engineers)

Basic Issue Items: See TM 9–7204.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	215 in.
Width	128 in.
Height	134 in.
Volume	2,135 cu ft
Gross weight	50,000 lb
Ship tons	
Area	196 sq ft

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9–7204, TM 9–2350–209–20P, TM 9–2300–223–20P.

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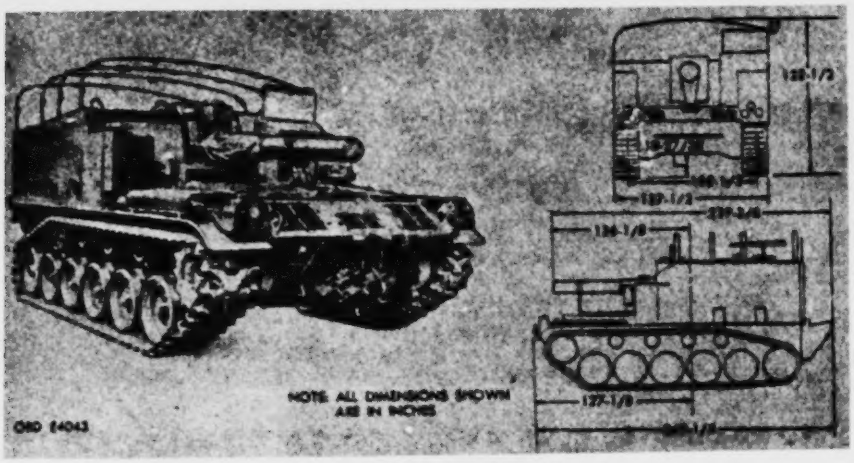
* For characteristics and data, see item in sections 14, 18, and 27.

HOWITZER, MEDIUM, SELF-PROPELLED: FULL TRACKED, 155-MM, M44 AND M44A1



Major item

Model	*Line item No.*	*Federal stock No.*
M44, w/e	4-18423-20	2350-838-5000
M44A1, w/e	4-18423-25	2350-563-7966

General

HOWITZER, MEDIUM, SELF-PROPELLED: full tracked, 155-mm, M44 and M44A1, is armored, full-track-laying vehicles, designed to provide armored, highly mobile 155-mm howitzer to give close support to both rapidly moving and standard infantry columns. The hull of the vehicles is a completely welded structure except for portions such as cover plates and grilles which are removable for service and maintenance. The vehicles may be identified by the enclosed howitzer, front and two sides. The vehicles are powered by air-cooled opposed cylinder engines. Power is transmitted to the final drives through cross-drive transmissions.

The vehicles are supported by six road wheels on each side, with the rear wheel acting as a track idler wheel. Stock absorbers, torsion bars, track support rollers, and tracks are also provided.

The hull of the vehicle is divided into two compartments: the engine compartment located at the front and the crew compartment located at the rear. The turret consists of an armored upper turret bolted to the lower turret in which the CANNON, 155 MILLIMETER HOWITZER: M45; MOUNT, HOWITZER: 155-mm, M80* are mounted. Ammunition is stored on swing-out doors located at the rear of the vehicles.

Differences among models

The M44A1 is similar in appearance to the M44. The difference being the modification of the M44 so that a fuel injection engine can be utilised in the M44A1.

Data plate location

The data plate is located on the steering bar support plate to the left of and below the instrument panel.

Classification:

M44	Standard B (OTCM 36841)
M44A1	Standard A (OTCM 36841)

CHARACTERISTICS

Crew	5
Length, overall	242½ in.
Length of vehicle	
Width, overall	127⅛ in.
Height, overall	127 in.
Height, to top of bow	122½ in.
Armament:	
CANNON, 155 MILLIMETER HOWITZER: M45; MOUNT, HOWITZER: 155-mm, M80	1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel	1
SUBMACHINEGUN, CALIBER .45: M3A1	1
CARBINE, CALIBER .30: M2	4
Tracks, width	25 in.
Tread (center to center of track)	102½ in.
Outside to outside of track	127⅛ in.
Angle of approach	
Angle of departure	
Type of fuel	gasoline
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment:	
M44	62,500 lb
M44A1	64,000 lb
Empty:	
M44	58,000 lb
M44A1	
Length of track on ground	149⅝ in.
Ground contact area—0-inch penteration	
Ground clearance	18¹⁄₁₆ in.
Ground pressure	9.4 psi
Pintle height (loaded)	
Height of howitzer	
Front of vehicle to of	127⅛ in.
Front of howitzer to of	126⅛ in.
Front of howitzer to rear of recoil spade	239⅜ in.
Electrical system:	
No. of volts	24
No. of batteries	4
Type of batteries	6TN
Fuel octane rating	80
Capacities:	
Fuel (total)	150 gal
Crankcase, refill (without cooler, cores, and lines)	44 qt
Transmission, cross-drive, refill (complete system)	64 qt
Final drive	6 qt
Brakes:	
Type	multiple disk, wet
Operation	
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-500-3
Type	cross-drive

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* For characteristics and data, see item in section 5.

CHARACTERISTICS—Continued

Transmission—Continued	
No. of ranges:	
Forward	2
Reverse	1
Final reduction	4.69:1
Differential-drive gear ratio	
Engine:	
Manufacturer	Continental
Model:	
M44	AOS-895-3
M44A1	AOSI-895-5
Type	air-cooled, opposed cylinders
Displacement	895 cu in.
No. of cylinders	6
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	5.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	500 at 2,800 rpm
Torque, gross (max w/std accessories):	
M44	960 ft-lb at 2,400 rpm
M44A1	975 ft-lb at 2,400 rpm
Type of ignition	magneto
Auxiliary engine-generator, model	GMC-4-41-2
Turret traversing and howitzer elevating system	power and manual

AMMUNITION

155-mm	24 rounds
Cal .50	900 rounds
Cal .30	720 rounds
Cal .45	180 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	26 ft
Fording depth:	
wo/deep-water fording kit	42 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	30 in.
Maximum width of ditch vehicle can cross	72 in.
Fuel consumption (average conditions)	0.5 mpg
Allowable speed recommended	35 mph
Maximum allowable towed load, gross	
Cruising range (average conditions)	76 mi

EQUIPMENT

Communications:	
Radio set	AN/PRC-8, 9, or 10, or AN/PRC-25
Intercommunication set	AN/UIC-1

Sighting and Fire Control:*

FUZE SETTER: M26 and M28

MOUNT, TELESCOPE: M95 and M96

POST, AIMING: M1A2

QUADRANT, FIRE CONTROL: M1A1

TELESCOPE: M12A7K and M93

TRIPOD, SURVEYING: FSN 6675-240-1881 (Issued w/POST, AIMING: M1 series when issued for Arctic use) (issued by Corps of Engineers)

Basic Issue Items: See TM 9-7004.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1, uncrated	
Length	325 in.
Width	140 in.
Height	134 in.
Volume	2,200 cu ft
Gross weight	56,000 lb
Ship tons	
Area	212 sq ft

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL G-279, TM 9-7004, TM 9-2350-203-20P.

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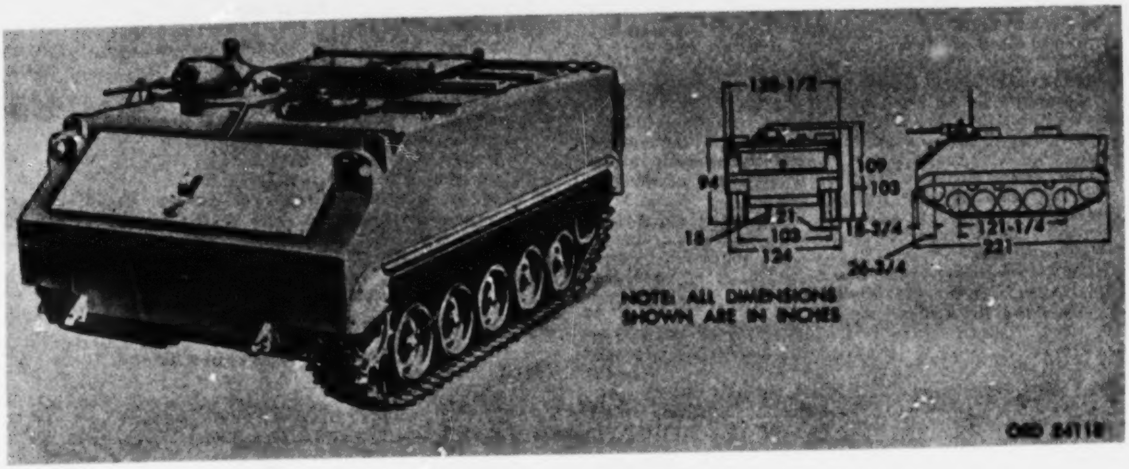
* For characteristics and data, see item in sections 14 and 18.

MORTAR, INFANTRY, SELF-PROPELLED: FULL TRACKED, 107-MM (FORMERLY 4.2 INCH) M84



Model	*Major item* *Line item No.*	*Federal stock No.*
M84, w/e	4-23647-00	2350-348-8593

General

MORTAR, INFANTRY, SELF-PROPELLED: full tracked, 107-mm (formerly 4.2 inch) M84, is a full track, lightly armored, fully inclosed amphibious vehicle, designed to provide mobility for the 4.2-inch mortar and crew protection. Fully loaded, the M84 can traverse inland water ways under its own power without any special preparation or equipment. The vehicle is powered by two water-cooled, inline cylinder engines. Power is transmitted to the final drives through two hydromatic transmissions.

The M84 is supported by a suspension system consisting of road wheels, torsion bars, idler wheels, and shock absorbers. The vehicle is also equipped with tracks T91E3, which provides propulsion and steering in water as well as on land. The vehicles even distribution of weight results in uniform loading of suspension on land and level trim on water. The M84 is identified by its high box like hull, on which a rectangular metal plate (trim vane) is mounted on the forward slope.

The vehicle hull is divided into seven compartments: the driver's and the commander's compartment in front, a personnel compartment in the rear, and a power plant on each side. A crew escape door is located in the right side of the rear loading ramp. When fully equipped, the mortar base plate assembly for ground operation is mounted on the outside of the rear loading ramp to the left of the escape door. The MORTAR, 107 MILLIMETER: M30* is floor mounted in the crew compartment. The armored top of the crew compartment may be opened to obtain a greater degree of elevation for the floor mounted mortar.

Differences among models

Data plate location

The data plate is located on the drive tunnel wall to the left of the driver's seat.

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Crew	6
Length, overall	
Length of vehicle	221 in.
Width, overall	128½ in.
Height:	
Overall	109 in.
Ground to top of cupola	103 in.
Ground to	94 in.
Front of vehicle to center of drive sprocket	18¾ in.
Center of drive sprocket to center of front road wheel	26¾ in.
Wheel base	121¼ in.
Armament:	
MACHINEGUN, CALIBER .30: Browning, M1919A4 flexible	1
MACHINEGUN, CALIBER .50: Browning, heavy barrel	1
CARBINE, CALIBER .30: M2	1
3.5 inch rocket launcher	1
Cal .30 rifle M1	2
MORTAR, 107 MILLIMETER: M30	1
SUBMACHINEGUN, CALIBER .45: M3A1	1
Tracks, width	21 in.
Tread (center to center of track)	103 in.
Outside to outside of track	124 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	47,100 lb
Empty	41,122 lb
Length of track on ground	123 in.
Ground contact area—0-inch penetration	
Ground clearance	18 in.
Ground pressure	8 psi
Pintle height (loaded)	28½ in.
Front of vehicle to center of vehicle	
Electrical system:	
No. of volts	24
No. of batteries	2
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	136½ gal
Cooling system (each engine)	28 qt
Crankcase (each engine)	11 qt
Transmission (each)	14 qt
Controlled differential (including oil cooler)	24 qt
Final drive	3½ qt
Brakes:	
Type	mechanical
Operation	hand lever controlled, controlled differential

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* For characteristics and data, see item in section 4.

CHARACTERISTICS—Continued

Transmission (two):	
Manufacturer	General Motors Corp
Model	301 MG
Type	hydromatic
Number of ranges:	
Forward	4
Reserve	1
Final reduction	4.25:1
Differential-drive gear ratio	
Engine (two):	
Manufacturer	General Motors Corp
Model	302
Type	water cooled, inline
Displacement	301.6 cu in.
No. of cylinders	6
Bore	4 in.
Stroke	4 in.
Compression ratio	7.2:1
Maximum governed speed (full load)	3,400 rpm
Brake horsepower, gross (max w/std accessories)	127 at 3,350 rpm
Torque, gross (max w/std accessories)	254 ft-lb at 1,800 rpm
Type of ignition	battery-distributor

AMMUNITION

4.2-inch mortar	88 rounds
Cal .50	2,205 rounds
3.5-inch rocket	10 rounds
Cal .30	3,000 rounds
Cal .30 rifle	64 rounds
Cal .30 carbine	360 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth	floats
Maximum vertical obstacle vehicle can climb	18 in.
Maximum width of ditch vehicle can cross	66 in.
Fuel consumption (average conditions)	0.84 mpg
Maximum allowable speed, recommended:	
Land	27 mph
Water	6.5 mph
Maximum allowable towed load, gross	14,000 lb
Cruising range (average conditions)	100 mi

* For characteristics and data, see item in sections 14, 18, and 27.

EQUIPMENT

Communications:

Radio set	AN/VRC-13, 14, or 15, or AN/VRC-46
Intercommunication set	AN/UIC-1

Sighting and Fire Control:*
- FUZE SETTER: M27
- MOUNT, PERISCOPE: M104A1
- PERISCOPE: M17 and M19
- POST, AIMING: M1A2
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/CASE, carrying
- SIGHT, PERISCOPE: M28
- SIGHTUNIT: M34A2
- TRIPOD, SURVEYING: FSN 6675-240-188: (issude w/POST, AIMING: M1 series when issued for Arctic use) (issued by Corps of Engineers)

Basic Issue Items: See TM 9-2300-203-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

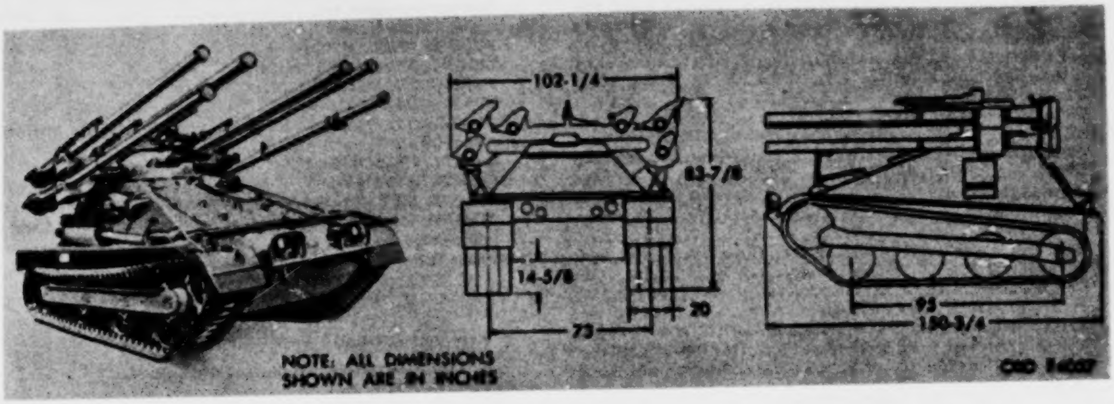
Shipped	
Length	
Width	
Height	
Volume	1,620 cu ft
Gross weight	
Ship tons	
Area	186 sq ft

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Area	

References: TM 9-2300-203-12, TM 9-2350-200-20P.

RIFLE, SELF-PROPELLED, FULL TRACKED: MULTIPLE, 106-MM, M50



Major item

Model	*Line item No.*	*Federal stock No.*
M50		2350-331-2306

General

RIFLE, SELF-PROPELLED, FULL TRACKED: multiple, 106-mm, M50, is a lightly armored, full-track-laying combat vehicle, designed for use by the Marine Corps to provide a highly-mobile and maneuverable vehicle to give close support to rapidly moving armored columns and standard Marine Infantry Divisions. The vehicle hull and all hinged doors and covers in the rear, top, and above the driver's compartment are of all-welded, armor plate construction with the exception of the floor. The vehicle is powered by a water-cooled valve-in-head engine. Power is transmitted to the final drives through a cross-drive, single stage, 4-element transmission.

The vehicle utilizes the torsion bushing type suspension, incorporating eight road wheels, shock absorbers, road wheels, track skids, track skid shoes, and tracks. Track adjusting screws are provided in the rear road wheel for adjusting track tension.

Six RIFLE, 106 MILLIMETER: M40A1C* are mounted on a 106-mm rifle mount on the upper section of the hull. For identification, the rifles are numbered 1 to 6, from left to right, looking at the rifles from the rear of the vehicle. Four RIFLE, CALIBER .50, SPOTTING: M8C* are mounted directly over the Nos. 2, 3, 4, and 5, RIFLE, 106 MILLIMETER: M40A1C,* respectively. The lower section of the hull supports the tracks, wheels, and other suspension components. The inside provides space for the power plant, personnel, controls, instruments, ammunition, equipment, and accessories.

Differences among models

Data plate location

The data plate is located on the engine petition below the instrument panel.

Classification: Standard for USMC (OTCM 35727)

CHARACTERISTICS

Crew	3
Length, overall	150¾ in.
Length of vehicle	
Center of front road wheel to center of rear road wheel	95 in.
Width, overall	102¼ in.
Height, overall	83⅞ in.
Armament:	
RIFLE, 106 MILLIMETER: M40A1C	6
MACHINEGUN, CALIBER .30: Browning, M1919A4, flexible	1
RIFLE, CALIBER .50, SPOTTING: M8C	4
Tracks, width	20 in.

Tread (center to center of track)	73 in.
Outside to outside of track	93 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	19,050 lb
Empty	16,450 lb
Length of track on ground	
Ground contact area—0-inch penetration	
Ground clearance	14⅝ in.
Ground pressure	4.69 psi
Pintle height, loaded	
Electrical system:	
No. of volts	24
No. of batteries	2 (12 volts)
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	47 gal
Crankcase (including filter)	10 qt
Transmission (including oil cooler)	28 qt
Final drive	5 qt
Brakes:	
Type	wet, multiple plate
Operation	mechanical
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	XT-90-2
Type	cross-drive-single stage 4-element
Number of ranges:	
Forward	
Reverse	
Final reduction	5.075:1
Engine:	
Manufacturer	General Motors Corp
Model	302
Type	valve-in-head, water-cooled
Displacement	301.6 cu ^{1}
No. of cylinders	
Bore	4 in.
Stroke	4 in.
Compression ratio	7.5:1
Maximum governed speed (full load)	3,400 rpm
Brake horsepower, gross (max w/std accessories)	145 at 3,400 rpm
Torque, gross (max w/std accessories)	255 ft-lb at 2,000 rpm
Type of ignition	battery

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*For characteristics and data see item in sections 2 and 4.

AMMUNITION

106-mm M40A/C	18 rounds
Cal .30	1,000 rounds
Cal .50	80 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
wo/deep-water fording kit	24 in.
w/deep-water fording kit	60 in.
Maximum verticle obstacle vehicle can climb	30 in.
Maximum width of ditch vehicle can cross	56 in.
Fuel consumption (average conditions)	3 mpg
Allowable speed, recommended	30 mph
Cruising range (average conditions)	150 mi

EQUIPMENT

Communications:

Radio set	AN/PRC-10 or 25

Sighting and Fire Control:*

- MOUNT, PERISCOPE: M05
- MOUNT, TELESCOPE: M90
- PERISCOPE: M13
- PERISCOPE: M20A3C
- QUADRANT, FIRE CONTROL: M1A1
- TELESCOPE, ELBOW: M92D

Basic Issue Items: See TM 9-2350-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	3,231 cu ft
Ship tons	
Area	305 sq. ft.

Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	
Area	

References: SNL G-288, TM 9-2350-212-12, TM 9-2350-212-35.

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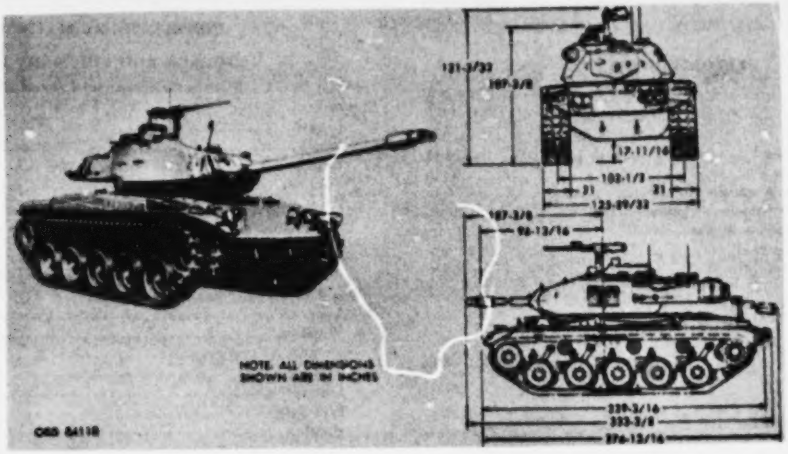
* For characteristics and data, see item in sections 14, 18, and 27.

TANK, COMBAT, FULL TRACKED: 76-MM GUN, M41, M41A1, M41A2 AND M41A3



Major item

Model	*Line item No.*	*Federal stock No.*
M41, w/e	4-44021-20	2350-738-6846
M41A1, w/e	4-44021-30	2350-835-8619
M41A2, w/e	4-44021-40	2350-566-4088
M41A3, w/e	4-44021-50	2350-566-4087

General

TANK, COMBAT, FULL TRACKED: 76-mm gun, M41, M41A1, M41A2, and M41A3, is full-track-laying armored combat vehicle capable of operating in temperatures ranging from −65° to +125° F. The vehicles were designed to provide mobile fire power and crew protection in offensive combat. Light weight permits airborne transit of the vehicles. The vehicles are powered by horizontally opposed 6-cylinder air-cooled engines. Power is transmitted to the final drives through cross-drive transmissions. Major armament is a high-velocity 76-mm gun mounted in the turret.

The vehicles are supported by a suspension system consisting of 10 road wheels running on a rear sprocket driven track. Shock absorbers, compensating wheels, track idler wheels, and support arms are also provided.

The hull of the vehicles is divided into three compartments: the driving compartment in the front, fighting compartment in the middle, and the engine compartment in the rear. The turret is mounted on a ball bearing race ring on top of the fighting compartment. A MACHINEGUN, CALIBER .30: Browning, M1919A4E1* is mounted coaxially with the CANNON, 76 MILLIMETER GUN: M32* within the turret. A MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel* can be mounted on either of two pintle stands for ground fire or protection against low-flying enemy aircraft.

Differences among models

The armament and vehicular characteristics of the M41 and M41A1 are nearly identical, the difference being in the installation of the late traversing and elevating mechanism in the M41A1.

The late traversing and elevating mechanism are used in the M41A2 and M41A3 also.

The M41A2 and M41A3 vehicles utilizes the fuel injection engine.

Data plate location

The data plate is located on the hull wall to the left of the driver's seat.

CHARACTERISTICS

M41	Standard B (OTCM 36841)
M41A1	Standard B (OTCM 36841)
M41A2	Standard A (OTCM 36841)
M41A3	Standard A (OTCM 36841)

* For characteristics and data, see item in sections 2 and 4.

CHARACTERISTICS

Crew	4
Length (gun forward)	323 3/8 in.
Length (gun in traveling position)	279 11/16 in.
Length of vehicle	220 3/16 in.
Width, overall	125 29/32 in.
Height, overall	121 3/32 in.
Height (to top of commander's cupola)	107 3/8 in.
Front of gun to center of turret	187 3/8 in.
Front of vehicle to center of turret	96 13/16 in.
Armament:	
CANNON, 76 MILLIMETER GUN: M32; MOUNT, GUN: M76	1
MACHINEGUN, CALIBER .30: Browning, M1919A4E1	1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel	1
Tracks, width	21 in.
Tread (center to center of track)	102 1/8 in.
Outside to outside of track	125 29/32 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	51,800 lb
Empty	
Length of track on ground	128 in.
Ground contact area—0-inch penetration	
Ground clearance	17 11/16 in.
Ground pressure	10.2 psi
Pintle height (loaded)	
Electrical system	24 volts
No. of batteries	4 (6 volts)
Type of batteries	
Fuel octane rating	80
Capacities:	
Fuel (total)	140 gal
Crankcase, refill (without cooler, cores, and lines)	44 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	44 qt
Final drive (each)	2.9 qt
Brakes	wet multiple disk, mechanical
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-500-3
Type	cross-drive
Number of ranges:	
Forward	1
Reverse	1
Final reduction	4.25:1

CHARACTERISTICS—Continued

Engine:	
Manufacturer	Continental or Lycoming
Model:	
M41 and M41A1	AOS-895-3
M41A2 and M41A3	AOS1-895-5
Type	opposed cylinder, air-cooled, supercharged
No. of cylinders	6
Displacement	895.9 cu in.
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	5.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	500 at 2,800 rpm
Torque, gross (max w/std accessories)	995 ft-lb at 2,400 rpm
Type of ignition	magnetos (2)
Auxiliary engine-generator	GMC Model A41-1
Traversing and elevating mechanism	manual and power

AMMUNITION

76-mm	65 rounds
Cal .50	2,175 rounds
Cal .45 for submachinegun	180 rounds
Cal .30 carbine	90 rounds
Cal .30 (coaxial)	5,000 rounds
Hand grenades	8
Ground signals	12

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
wo/deep-water fording kit	40 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	28 in.
Maximum width of ditch vehicle can cross	72 in.
Fuel consumption (average conditions)	0.7 mpg
Allowable speed, recommended	45 mph
Maximum allowable towed load, gross	10,000 lb
Cruising range (average conditions)	100 mi

EQUIPMENT

Communications:

AN/GRC-3-7 or 8; AN/ARC-3, AN/UIC and AN/VIA-1

Sighting and Fire Control:*

- DRIVE, BALLISTIC: M4
- FUZE SETTER: M27
- INDICATOR, AZIMUTH: M31
- LIGHT, INSTRUMENT: M30
- MOUNT, PERISCOPE: M93
- MOUNT, PERISCOPE: M94
- MOUNT, TELESCOPE: M92 or M92A1
- PERISCOPE: M13, M17, M19, and M20
- QUADRANT, FIRE CONTROL: gunner's, M1 or M1A1, w/CASE, carrying
- TELESCOPE: M97

Basic Issue Items: See TM 9-2350-201-12

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	2,290 cu ft
Area	245 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-251, TM 9-2350-201-12, TM 9-2350-201-20P.

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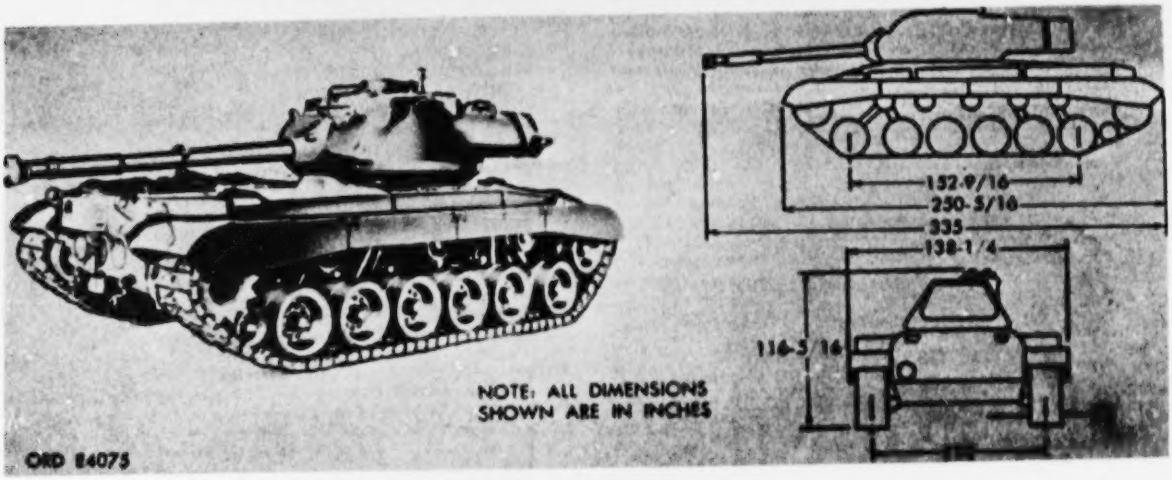
* For characteristics and data, see item in sections 12, 14, 18, and 27.

TANK, COMBAT, FULL TRACKED: 90-MM GUN, M47



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Major item

Model	*Line item No.*	*Federal stock No.*
M47, w/e	4-44061-50	2350-735-1725

General

TANK, COMBAT, FULL TRACKED: 90-mm gun, M47, is an early production, medium armored, full-track-laying, low silhouette combat vehicle used to provide mobile fire power and crew protection for offensive combat. The vehicle is powered by a 12-cylinder, V-type, four-stroke-cycle, air-cooled engine. Power is transmitted to the final drives by a cross-drive transmission attached directly to the engine. The vehicle is identified by the covered engine exhaust mufflers located on each rear fender, six rollers supporting the tracks, sharply tapered turret with a small gun shield and a storage box mounted on the rear of the turret bulge.

The vehicle is supported by a torsion bar suspension system consisting of transverse torsion bars, wheel arms, and road wheels.

The vehicle hull is constructed of armored plate and cast armor sections welded together and reinforced. A transverse bulkhead separates the crew compartment of the front from the engine compartment at the rear. The turret is a cast structure formed of homogeneous armor steel. Principal armament CANNON, 90 MILLIMETER GUN: M36,* and a MACHINEGUN, CALIBER .30: Browning, M1919A4E1 coaxially mounted in the combination gun mount M78. Secondary armament includes a MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel,* mounted in a pintle stand on the turret roof, and a second MACHINEGUN, CALIBER .30: Browning M1919A4E1, flexible,* mounted in a flexible ball mount in the bow of the vehicle.

Differences among models

Data plate location

The data plate is located on the hull wall at the left side of the crew compartment.

Classification: Limited standard (OTCM 37696)

CHARACTERISTICS

Crew	5
Length, overall:	
(Gun in traveling position)	279⅝ in.
(Gun forward in firing position)	335 in.
Length of vehicle	$250\frac{5}{16}$ in.
Wheel base	$152\frac{9}{16}$ in.
Width, overall	138¼ in.
Height, overall (without machinegun)	$116\frac{5}{16}$ in.
Height, overall (with machinegun)	132 in.
Armament:	
CANNON, 90 MILLIMETER GUN: M36	1
MACHINEGUN, CALIBER .30: Browning, M1919A4E1	2
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel	1
Tracks, width	23 in.
Tread (center to center of tracks)	110 in.
Outside to outside of track	133 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	101,775 lb
Empty	92,883 lb
Length of track on ground	154 in.
Ground contact area—0-inch penetration	
Ground clearance	18½ in.
Ground pressure	13.3 psi
Pintle height (loaded)	28.6 in.
Electrical system	24 volts
No. of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	233 gal
Crankcase, refill (without cooler, cores, and lines)	64 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	72 qt
Final drive (each)	8 qt
Brakes	wet multiple-disk
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-850-4, 4A or 4B
Type	cross-drive
No. of ranges:	
Forward	2
Reverse	1
Final reduction	4.74:1
Engine:	
Manufacturer	Continental
Model	AV-1790-5B, -7, or -7B
Type	V-type, air-cooled
Displacement	1791.75 cu in.
No. cylinders	12
Bore	5.75 in.
Stroke	5.75 in.

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* For characteristics and data, see item in sections 2 and 4.

CHARACTERISTICS—Continued

Engine—Continued	
Compression ratio	6.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	810 at 2,800 rpm
Torque, gross (max w/std accessories)	1,560 ft-lb at 2,400 rpm
Type of ignition	magneto
Auxiliary engine-generator	Wisconsin Model TFT
Traversing and elevating mechanism	power and mechanical

AMMUNITION

90-mm	71 rounds
Cal .50	3,440 rounds
Cal .45	180 rounds
Cal .30 (machinegun)	4,125 rounds
Cal .30 (carbine)	90 rounds
Smoke grenades	8

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot
Fording depth:	
wo/deep-water fording kit	48 in.
w/deep-water fording kit	
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	102 in.
Fuel consumption (average conditions)	0.33 pmg
Allowable speed, recommended	30 mph
Maximum allowable towed load, gross	10,000 lb
Cruising range (average conditions)	80 mi

EQUIPMENT

Communications:

AN/GRC-3, 4, 5, 6, 7, or 8 and AN/VIA-1, or AN/VRC-47

Sighting and Fire Control:*

DRIVE, BALLISTIC: M3
FUZE SETTER: M27
INDICATOR, AZIMUTH: M31
INVERTER: ORD No. 7633006
LIGHT, INSTRUMENT: M30
MOUNT, PERISCOPE: M29
MOUNT, PERISCOPE: M88
PERISCOPE: M13, M19, and M20A3
QUADRANT, FIRE CONTROL: gunner's, M1 or M1A1, w/CASE, carrying
QUADRANT, FIRE CONTROL: elevation, M13
RANGE FINDER, FIRE CONTROL: M12
TRANSMITTER, SUPERELEVATION: M22

Basic Issue Items: See ORD 7 SNL G-262.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	2,610 cu ft
Area	269 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-262, TM 9-2350-200-12.

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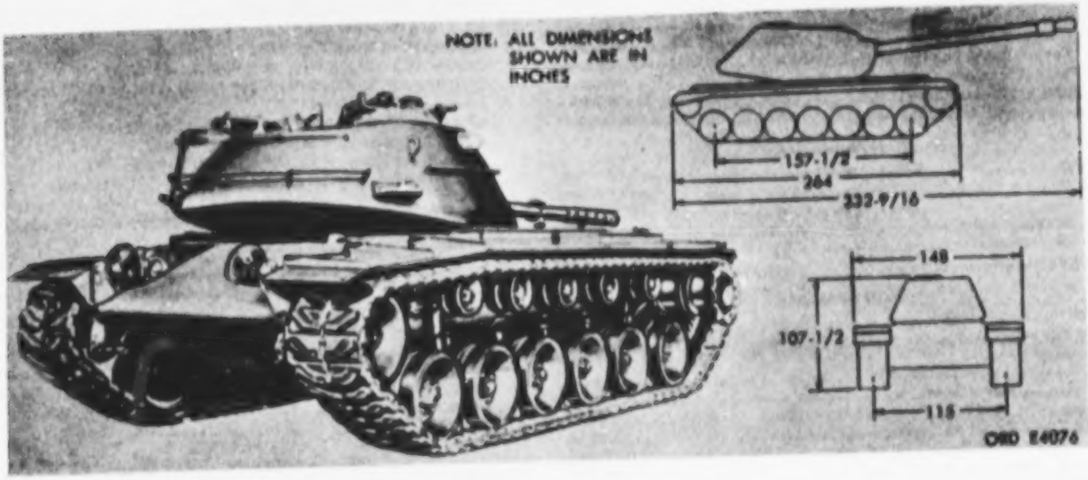
* For characteristics and data, see item in sections 14, 16, and 27.

TANK, COMBAT, FULL TRACKED: 90-MM GUN, M48 AND M48C*



Major item

Model	*Line item No.*	*Federal stock No.*
M48, w/e	4-44061-55	2350-736-4202
M48C, w/e	4-44061-70	2350-336-0240

General

TANK, COMBAT, FULL TRACKED: 90-mm gun, M48 and M48C, is medium armored, full-track-laying low silhouette combat vehicle used to provide mobile fire power and crew protection for offensive combat. The vehicles are powered by 12-cylinder, V-type, 4-cycle, air-cooled engines. Power is transmitted to the final drives through cross-drive transmissions, which are combined transmission, differential, steering, and braking units. The vehicles may be identified by their elliptical cast turrets with the fire control range finder sights protruding from both sides. The hull ventilating blower is mounted in the top left corner of the turret.

The vehicles are equipped with a suspension system consisting of road wheels, torsion bars, compensating idler wheels, bumper springs, and tracks. Fender dust shields, standard on other vehicles of this type are not included on the M48 series.

The hull of the vehicles is of cast armor with an armor plate floor, and is divided into two compartments. The crew compartment (driving and fighting) at the front and the engine compartment (engine and transmission) at the rear. The engine compartment is covered by removable armored grilles. Major armament for the vehicles is a CANNON, 90 MILLIMETER GUN: M41.** A MACHINEGUN, CALIBER .30: Browning, M1919A4E1** is coaxially mounted with the 90-mm gun. A remotely operated MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel** is mounted on the commander's cupola.

Differences among models

The M48 is an early production model, has a small driver compartment hatch and early type commanders cupola with an unprotected machinegun mount, designed by the Chrysler Corporation.

The M48C is similar in appearance to the M48. The difference being in the strength of the armored hulls. The M48C is not suited for combat and is to be used for training purposes only. The letter "C" is embossed in the right front of the hull meaning the tank is "non-ballistic."

Data plate location

The data plate is located on a bracket directly above the brake pedal.

Classification

M48	standard B
M48C	limited standard

CHARACTERISTICS

Crew	4
Length, overall:	
(Gun in traveling position)	$292\frac{11}{16}$ in.
(Gun forward in firing position)	$332\frac{9}{16}$ in.
Length of vehicle	264 in.
Wheel base	157½ in.
Width, overall	148 in.
Height, overall:	
(Without machinegun)	107½ in.
(With machinegun)	127⅜ in.
Armament:	
CANNON, 90 MILLIMETER GUN: M41	1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel	1
MACHINEGUN, CALIBER .30: Browning, M1919A4E1	1
Tracks, width	
Tread (center to center of track)	115 in.
Outside to outside of track	
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	90,000 lb
Empty	93,125 lb
Length of track on ground	157½ in.
Ground contact area—0-inch penetration	
Ground clearance	15½ in.
Ground pressure	11.2 psi
Pintle height (loaded)	
Electrical system	24 volts
No. of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	200 gal
Crankcase, refill (without cooler, cores, and lines)	72 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	92 qt
Final drives	
Brakes	wet multiple disk
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-850-4, -4A, or -4B
Type	cross-drive

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* For data, differences among models, and characteristics of the modified models of the M48 series, see pages 23-28 and 23-30.

** For characteristics and data, see item in sections 2 and 4.

CHARACTERISTICS—Continued

Transmission—Continued	
No. of ranges:	
Forward	2
Reverse	1
Final reduction	5.08:1
Engine:	
Manufacturer	Continental
Model	AV-1790-5B, -7, -7B, or -7C
Type	V-type, air-cooled
Displacement	1,790 cu in.
No of cylinders	12
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	6.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	810 at 2,800 rpm
Torque, gross (max w/std accessories)	1,560 ft-lb at 2,400 rpm
Type of ignition	magneto
Auxiliary engine	GMC model A-41-2
Traversing and elevating mechanism	manual and mechanical

AMMUNITION

90-mm	60 rounds
Cal .50	180 rounds
Cal .30	5,900 rounds
Cal .45	180 rounds
Cal .30 (for carbine)	180 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
wo/deep-water fording kit	48 in.
w/deep-water fording kit	96 in
Maximum vertical obstacle vehicle can climb	36 in
Maximum width of ditch vehicle can cross	102 in.
Fuel consumption (average condition)	¼ mpg
Allowable speed, recommended	26 mph
Cruising range (average conditions)	70 mi

EQUIPMENT

Communications:

Radio set .... AN/GRC-3 through 8 series or AN/VRC-47, AN/ARC-27 or AN/VRC-24.

Sighting and Fire Control:*

CARD, TANK RANGE (ORD dwg No. D8724207)
COMPUTER, BALLISTIC: M13
DRIVE, BALLISTIC: M45
FUZE SETTER: M27
INDICATOR, AZIMUTH: M28
PERISCOPE: M17, M20A8, or M20A1, M24 (T41), and M26
QUADRANT, FIRE CONTROL: gunner's, M1A1, w/CASE, carrying
QUADRANT, FIRE CONTROL: elevation, M13A1
RANGE FINDER, FIRE CONTROL: M13 (T46E1)
TELESCOPE: M97C (T156E1)

Basic Issue Items: See ORD 7 SNL G-254.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-254, TM 9-7012.

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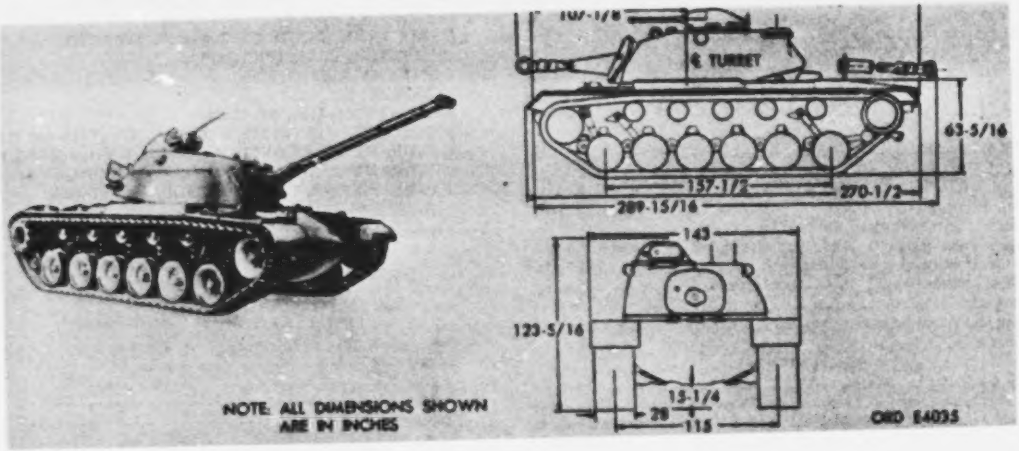
* For characteristics and data, see item in sections 12, 14, 15, 18, and 27.

TANK, COMBAT, FULL TRACKED: 90-MM GUN, M48A1*



Model	*Major item* *Line item No.*	*Federal stock No.*
M48A1, w/e	4-44061-60	2350-301-8456

General

TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1, is a medium armored, full-track-laying, low silhouette combat vehicle used to provide mobile fire power and crew protection for offensive combat. The vehicle is powered by a 12-cylinder, V-type, 4-cycle, air-cooled engine. Power is transmitted to the final drives through a cross-drive transmission, which is a combined transmission, differential and steering unit. The vehicle may be identified by its elliptical cast turret with the fire control range finder sights protruding from both sides. The hull ventilating blower is mounted in the top left corner of the turret.

The vehicle is equipped with a suspension system consisting of road wheels, torsion bars, compensating idler wheels, bumper springs, and tracks. Fender dust shields, standard on other vehicles of this type, are included on the M48 series.

The vehicle hull is of cast armor with an armor plate floor. The hull is divided into two compartments. The crew compartment (driving and fighting) at the front and the engine compartment (engine and transmission) at the rear. The engine compartment is covered by removable armored grilles. Major armament for the vehicles is CANNON, 90 MILLIMETER GUN: M41.** A MACHINEGUN, CALIBER .30: Browning M1919A4E1,** is coaxially mounted with the 90-mm gun. A remotely operated MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel,** is mounted on the commander's cupola.

Differences among models

The M48A1 is an early production model with a large driver's hatch and a later type commanders dual purpose caliber .50 machinegun cupola.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Crew	4
Length:	
(Gun in traveling position)	289 11/16 in.
(Gun forward in firing position)	343 23/32 in.
Length of vehicle	270 1/2 in.
Front of vehicle to center of turret	107 1/2 in.
Wheel base	157 1/2 in.
Height, overall	123 5/16 in.
Height (ground to top of)	63 5/16 in.
Width	143 in.
Armament:	
90-mm gun cannon M41	1
MACHINEGUN, CALIBER .30: Browning, M1919A4E1	1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel	1
Tracks, width	28 in.
Tread (center to center of tracks)	115 in.
Outside to outside of track	
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	104,000 lb
Empty	97,000 lb
Length of track on ground	157 1/2 in.
Ground contact area—0-inch penetration	
Ground clearance	15 1/2 in.
Ground pressure	11.8 psi
Pintle height (loaded)	
Electrical system	24 volts
No. of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating	80
Capacities:	
Fuel (total)	200 gal
Crankcase, refill (without cooler, cores, and lines)	72 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	92 qt
Final drives	
Brakes	wet, multiple disk
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-850-4B
Type	cross-drive
No. of ranges:	
Forward	2
Reverse	1
Final reduction	5.08:1
Engine:	
Manufacturer	Continental
Model	AV-1790-7C
Type	V-type, air-cooled

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* For data, differences among models, and characteristics of the modified models of the M48 series, see pages 23-26 and 23-30.

** For characteristics and data, see items in sections 2 and 4.

CHARACTERISTICS—Continued

Engine—Continued	
Displacement	1,791 cu in.
No. of cylinders	12
Bore	5.746 in.
Stroke	5.750 in.
Compression ratio	6.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	810 at 2,800 rpm
Torque, gross (max w/std accessories)	1,600 ft-lb at 2,800 rpm
Type of ignition	magneto

AMMUNITION

90-mm	60 rounds
Cal. .30	5,900 rounds
Cal. .50	500 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
Fording depth:	
w/o deep-water fording kit	48 in.
w/deep-water fording kit	96 in.
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	102 in.
Fuel consumption (average conditions)	1/3 mpg
Allowable speed, recommended	26 mph
Cruising range (average conditions)	70 mi
w/Jettison fuel tanks	135 mi

EQUIPMENT

Communications:	
Radio set	AN/GRC-3, -4, -7 or -8; AN/VRC-47, AN/ARC 27 or AN/VRC-24
External interphone	AN/VIA-1

Sighting and Fire Control:*

CARD, TANK RANGE (Ord dwg No. 8724207)
COMPUTER, BALLISTIC: M13A1(T31E1)
DRIVE, BALLISTIC: M5 (T24E2)
FUZE SETTER: M27
INDICATOR, AZIMUTH: M28A1(T28E1)
MOUNT, PERISCOPE: M102A1(T184)
MOUNT, PERISCOPE: M104A1
MOUNT, TELESCOPE: M103 (T191)
PERISCOPE: M27, M24, and M20A3 or M20A1(1)
QUADRANT, FIRE CONTROL: elevation, M13A1
QUADRANT, FIRE CONTROL: gunner's, M1A1, w/ CASE, carrying
RANGE FINDER, FIRE CONTROL: M13 (T46E1)
SIGHT, PERISCOPE:M28 (T46)
TELESCOPE: M97C (T156E1)

Basic Issue Items: See ORD 7 SNL G–254.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	2,910 cu ft
Area	294 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G–254; TM 9–7012.

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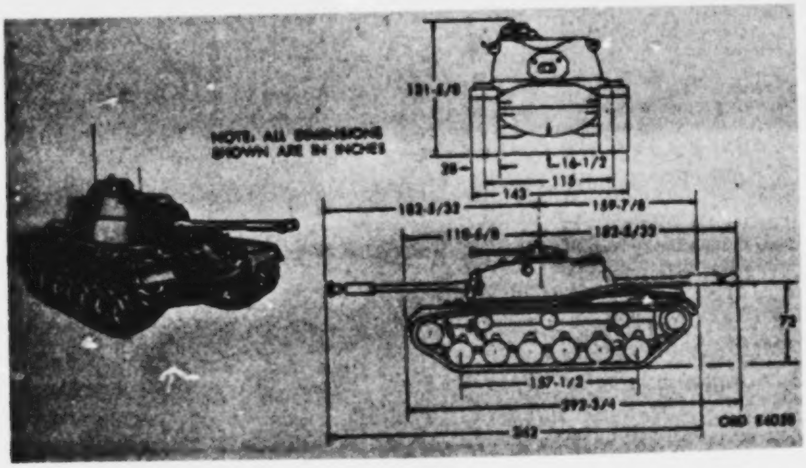
* For characteristics and data, see items in sections 12, 14, 15 and 18.

TANK, COMBAT, FULL TRACKED: 90-MM GUN, M48A2 AND M48A2C*



Major item

Model	*Line item No.*	*Federal stock No.*
M48A2	4-44061-65	2350-346-7560
M48A2C	4-44061-67	2350-679-4812

General

TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2 and M48A2C, is medium armored, full-track-laying, low silhouette combat vehicle. The vehicles are powered by 12-cylinder, V-type, 4-cycle, air-cooled engines. Power is transmitted to the final drives through cross-drive transmissions, which are combined transmissions, differential, braking, and steering units. These vehicles may be identified by their elliptical turrets with the fire control range finder sights protruding from both sides. The hull ventilating blower is mounted in the top left corner of the turret.

The vehicles are equipped with a modified suspension system consisting of road wheels, torsion bars, compensating idler wheels, bumper springs, and tracks. The track fenders are modified and a larger stowage rack installed on the turret.

The hull of the vehicles is a homogeneous armor steel casting, with an armor plate floor, and is divided into two compartments. The crew compartment (driving and fighting) at the front and the engine compartment (engine and transmission) at the rear. The engine compartment is covered by removable armored grilles. Major armament for the vehicles is a CANNON, 90-MILLIMETER GUN: M41.** One MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel,** is installed in the cal. .50 machinegun mount M1** on the turret roof and operated from inside the turret. One MACHINEGUN, CALIBER .30: Browning, M1919A4E1,** is coaxially mounted with the 90-mm gun.

Differences among models

Major difference in M48A2 and M48A2C is in vision and fire control equipment. The only visual difference between the M48A2C and the M48A2, is the absence of the small track idler wheels located between the drive sprocket and rear road wheels of the M48A2.

The M48A2 and M48A2C tanks are equipped with a larger driver's hatch and late type commander's cupola as the M48A1. Lowered doors and a raised rear deck provide for better ventilation of the modified engine assembly.

Data plate location

The data plate is located on a bracket directly above the brake pedal.

Classification

M48A2	Standard B (OTCM 37038)
M48A2C	Standard B (OTCM 37025)

CHARACTERISTICS

Crew	4
Length, overall	342 in.
(Gun in traveling position)	292¾ in.
(Gun forward in firing position)	342 in.
Length of vehicle	
Front of gun to center of turret	182 5/32 in.
Front of vehicle to center of turret	110⅝ in.
Front of gun to center of turret (gun traversed 180°)	182 5/32 in.
Center of turret to rear of vehicle	159⅞ in.
Width, overall	143 in.
Height, overall	121⅝ in.
Wheel base	157½ in.
Height, above ground	16½ in.
Armament:	
CANNON, 90-MILLIMETER GUN: M41	1
MACHINEGUN, CALIBER .30: BROWNING, M1919A4E1 or M37	1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel	1
Tracks, width	28 in.
Tread (center-to-center of track)	115 in.
Outside-to-outside of track	143 in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	
Empty	
Length of track on ground	
Ground contact area—0-inch penetration	
Ground clearance	15¼ in.
Ground pressure	11.9 psi
Pintle height (loaded)	
Fender height (ground to top)	72 in.
Electrical system	24 volts
No. of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating	83
Capacities:	
Fuel (total)	335 gal
Crankcase, refill (without cooler, cores, and lines)	64 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	92 qt
Final drive	

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* For data, differences among models, and characteristics of the modified models of the M48 series, see pages 23-26 and 23-28.

** For characteristics and data, see items in sections 2 and 4.

CHARACTERISTICS—Continued

Brakes	wet, multiple disk
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-850-5
Type	cross-drive
No. of ranges:	
Forward	2
Reverse	1
Final reduction	4:1
Engine:	
Manufacturer	Continental
Model	AVL-1790-8
Type	V-type, 4-cycle, air-cooled
Displacement	1,791 cu in.
No. of cylinders	12
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	6.35:1
Maximum governed speed (full load)	2,820 rpm
Brake horsepower, gross (max w/std accessories)	825 at 2,800 rpm
Torque, gross (max w/std accessories)	1,670 ft-lb at 2,800 rpm
Type of ignition	magneto (4)
Auxiliary engine-generator	GMC-A41-2
Traversing and elevating system	manual and hydraulic

AMMUNITION

90-mm	64 rounds
Cal. .30	5,590 rounds
Cal. .50	1,365 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots
w/o deep-water fording kit	48 in.
w/deep-water fording kit	96 in.
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	102 in.
Fuel consumption (average conditions)	.47 mpg
Allowable speed, recommended	30 mph
Cruising range (average conditions)	160 mi
w/jettison fuel tanks	250 mi

EQUIPMENT

Communications:	
Radio set	AN/GRC-3, -4, -5, -6, -7, or -8; AN/ARC-27, AN/VRC-47 or AN/VRC-24.
Auxiliary interphone equipment	AN/VIA-4

Sighting and Fire Control: *
- CARD, TANK RANGE: (Ord dwg No. D8724207)
- COMPUTER, BALLISTIC: M13A1 (T31E1) (for M48A2 only)
- COMPUTER, BALLISTIC: M13A1C (for M48A2C only)
- DRIVE, BALLISTIC: M5A1 (T24E5) (for M48A2 only)
- DRIVE, BALLISTIC: M5A2 (for M48A2C only)
- FUZE SETTER: M27
- INDICATOR, AZIMUTH: M28A1
- MOUNT, PERISCOPE: M102A1 (T184)
- MOUNT, PERISCOPE: M104A1
- MOUNT, TELESCOPE: M103 (T191)
- PERISCOPE: M20A3 (for M48A2 only)
- PERISCOPE: M20A3F (for M48A2C only)
- PERISCOPE: M24 (T41) and M27 (T36)
- QUADRANT, FIRE CONTROL: elevation, M13A1
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/Case, carrying
- RANGE FINDER, FIRE CONTROL: M13A1 (for M48A2 only)
- RANGE FINDER, FIRE CONTROL: M17C (M13A1E1) (for M48A2C only)
- SIGHT, PERISCOPE: M28 (T46) (for M48A2 only)
- SIGHT, PERISCOPE: M28C (for M48A2C only)
- TELESCOPE: M97C (T156E1)

Basic Issue Items: See TM 9-7022.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

Outside Continental United States

Shipped
Length
Width
Height
Volume
Area
Gross weight
Ship tons

References: SNL G-287; TM 9-7022; TM 9-2350-208-20P; TM 9-2350-208-35P.

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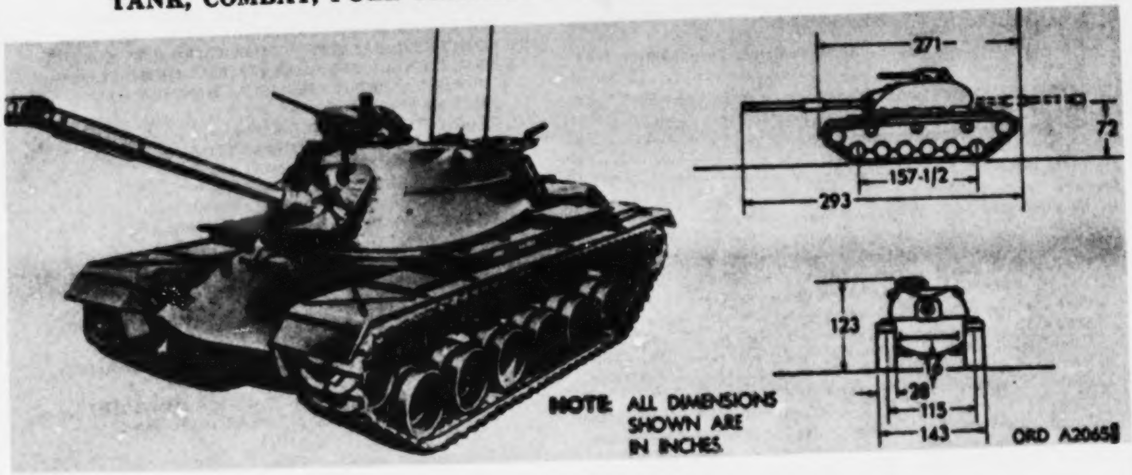
* For characteristics and data, see items in sections 12, 14, 15, 18 and 27.

TANK, COMBAT, FULL TRACKED: 90-MM GUN, M48A3 (M48A1E2), W/E



Major Item

Model	*Line item No.*	*Federal stock No.*
M48A3	4-44061-68	2350-895-9154

General

TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A3 is a full-tracked vehicle with individual torsion bar suspension, center guide track, and rear sprocket drive. The tank employs the M1 Cupola and combines features of the M48A1 * and M48A2 * tank. Two (Nos. 2 and 4) support rollers and the rear track tension idler wheel and arm of the M48A1 tank are removed. The M48A2 tank design front compensating idler spindle and arm are incorporated to improve durability of the suspension system over the M48 * and M48A1 * tank.

Differences among models

Data plate location

Classification: Standard B (OTCM 37822).

CHARACTERISTICS

Crew	4
Length, overall:	
(Gun in traveling position)	292⅝ in.
(Gun forward in firing position)	342 in.
Length of vehicle	298 in.
Front of vehicle to center of turret	110.625 in.
Height, overall	123 in. (reducible to 117⅝ in.)
Width	143 in. (reducible to 130⅝ in.)
Armament:	
CANNON, 90 MILLIMETER GUN: M41	
MOUNT, GUN: combination, M87A1	
Tracks, width	28 in.
Tread (center to center of tracks)	115 in.
Outside to outside of track	143 in.
Angle of approach	
Angle of departure	
Type of fuel	(VV-F-800) diesel
Center of gravity above ground	
Weight of vehicle:	
Gross (Combat loaded)	104,000 lb
Net (Less crew, stowage and fuel)	98,000 lb
Payload (W/crew and equipment)	56,000 lb
Length of track on ground	157½ in.
Ground contact area —0-inch penetration	
Ground clearance	16 in.
Ground pressure	11.8 psi
Pintle height (loaded)	
Electrical system	24 volt
Number of batteries	6
Type of batteries	6TN
Fuel cetane rating	40
Capacities:	
Fuel (total)	375 gal
Crankcase, refill (w/o cooler, cores, and lines)	12 gal
Transmission, refill (w/o cooler, cores, and lines)	17 gal
Final drives	8 qt
Brakes	multiple disc, mechanical
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model	CD-850-6
Type	Cross-drive, single stage
Number of ranges:	
Forward	2
Reverse	1
Final reduction	5.08:1
Engine:	
Manufacturer	Continental
Model	AVDS-1790-2A
Type	90 deg, V-type, air-cooled diesel
Displacement	1790 cu in.
Number of cylinders	12
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	16:1
Maximum governed speed (full load)	2,400 rpm
Brake horsepower, gross (max w/std accessories)	750 @ 2,400 rpm
Torque, gross (max w/std accessories)	1,710 lb-ft @ 1,800 rpm
Type of ignition	compression

AMMUNITION

90-mm	62 rounds
7.62-mm	6,000 rounds
Cal. .50	630 rounds
Cal. .45	360 rounds
Grenades	8

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* For data, difference among models, and characteristics of the modified models of the M48 series, see pages 23-26, 23-28, and 23-30.

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot
Fording depth:	
w/o deep-water fording kit	4 ft
Maximum vertical obstacle vehicle can climb	3 ft
Maximum width of ditch vehicle can cross	8 ft, 6 in.
Fuel consumption (average conditions)	.7 mpg
Allowable speed, recommended	30 mph
Cruising range (average conditions)	288 mi

EQUIPMENT

Communications:

AN/GRC-3 or -4 or -7 or -8 plus AN/VIA-1; AN/GRC-3 or -7 plus AN/VIA-1 plus ground-air radio set; AN/VRC-12 plus ground-air radio set.

Sighting and fire control:**

COMPUTER, BALLISTICS: M13A1C
DRIVE, BALLISTICS: M10B1
FUZE SETTER: M27
MOUNT, TANK PERISCOPE: M104A1
MOUNT, TANK PERISCOPE: M115-(M197)
MOUNT, TELESCOPE: M114 (T199)
PERISCOPE, TANK: M24
PERISCOPE, TANK: M27
PERISCOPE, TANK: M31
QUADRANT, ELEVATION: M13A3
RANGE CARD: Dwg No. D8724207
LIGHT, INSTRUMENT: M30
LIGHT, INSTRUMENT: M50
RANGE FINDER, FIRE CONTROL: M17B1C
SIGHT, INFINITY: M44C
SIGHT, PERISCOPE: M28C
TELESCOPE, ARTICULATED: M105 (T171)

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 tank

Length --
Width --
Height --
Volume --
Area --
Gross weight --
Ship tons --

Outside Continental United States

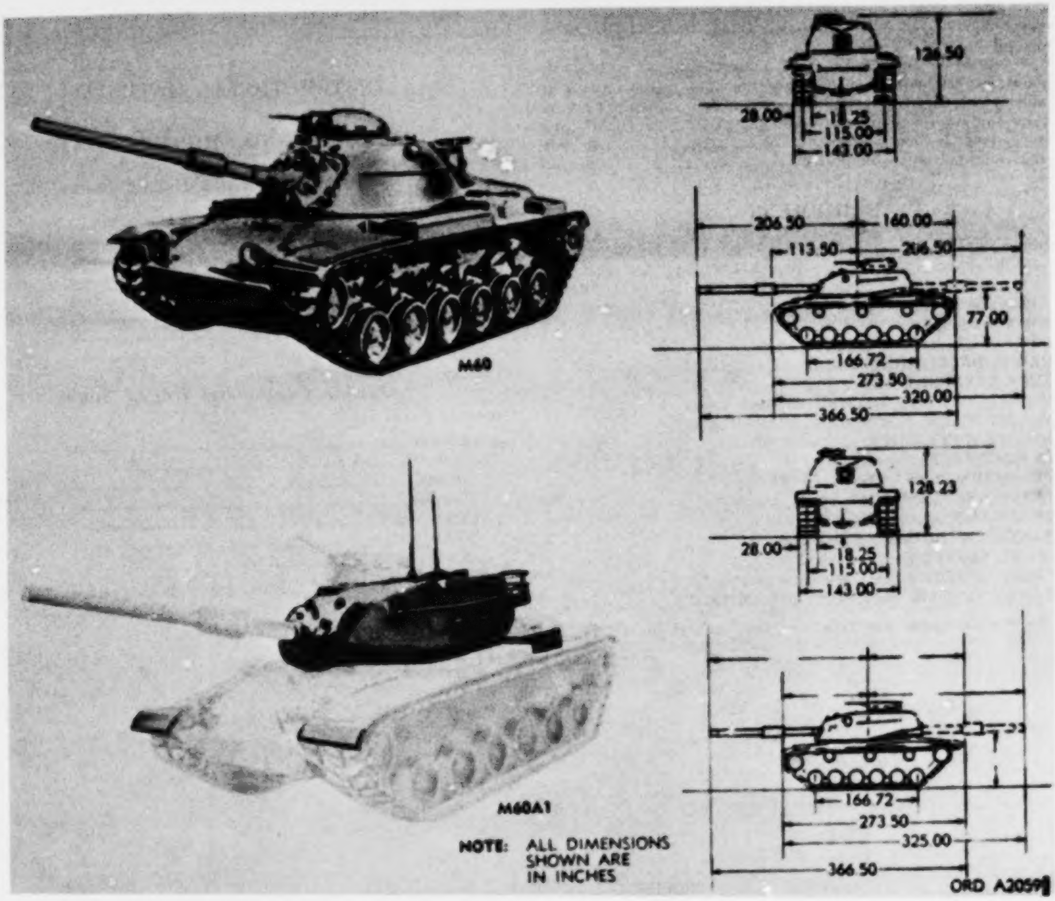
Shipped 1 tank

Length --
Width --
Height --
Volume --
Area --
Gross weight --
Ship tons --

References: TM 9-2350-224-10, TM 9-2350-224-10/1, TM 9-2350-224-20P, TM 9-2350-224-35, TM 9-2350-224-35P.

** For characteristics and data, see items in sections 12, 14, 18 and 27.

TANK, COMBAT, FULL TRACKED: 105-MM GUN, M60 AND M60A1



ORD A20591

Major Item

Model	*Line item No.*	*Federal stock No.*
M60, w/e	4-44061-35	2350-678-5773
M60A1, w/e	4-44061-51	2350-756-8497

General

TANK, COMBAT, FULL TRACKED: 105-mm gun, M60 or M60A1, is a full-tracklaying heavily armored combat vehicle designed to provide an improved tank for increased operational range and mobility requiring a minimum of refueling and servicing and incorporating an improved main armament. The vehicle is powered by an air-cooled compression-ignition engine. Power is transmitted to the final drive through a cross-drive transmission, which is a combined transmission, differential, steering, and braking unit. One distinguished feature of the vehicle is the gun bore evacuator which is located on the gun tube adjacent to the gun shield, rather than on the muzzle end of the tube.

The vehicle is supported by a torsion bar suspension system incorporating 12 dual aluminum road wheels, with 6 rollers supporting the rear driven track. The design of the M60 vehicle suspension as well as its cast hull and turret is similar to that of the M48A2 tank.

The hull of the vehicle is a homogeneous steel casting and is divided into two compartments: the crew compartment (driving and fighting) at the front, and the engine compartment (engine and transmission) at the rear.

Major armament for the vehicle is CANNON, 105-MM GUN: M68 * in MOUNT, GUN: M116 * (for M60 tank) or MOUNT, GUN: M140 * (for M60A1 tank). One MACHINE GUN, 7.62 MILLIMETER: tank, M73 (T197E2) * is coaxially mounted with the 105-mm gun cannon. One MACHINE GUN, CALIBER .50: M85 (T175E2) is mounted inside the CUPOLA, TANK COMMANDER'S: cal. .50 machine gun, M19 *.

Differences among models

The turrets of the M60 and M60A1 tank are of different design. Also, the external storage rack of the M60A1 extends completely around the rear of the turret and the lower portion is screened.

Data, plate location

The data plate is located on a bracket directly above the brake pedal.

Classification: M60—Standard B (OTCM 37933).
M60A1—Standard A (OTCM 37933).

* For characteristics and data, see item in sections 2 and 4.

CHARACTERISTICS

Crew	4
Length:	
(Gun forward in firing position):	
M60	366.50 in.
M60A1	371.50 in.
(Gun in traveling position):	
M60	320 in.
M60A1	325 in.
Length of vehicle	273.50 in.
Front of gun to center of turret:	
M60	206.50 in.
M60A1	211.50 in.
Front of vehicle to center of turret:	
M60	113.50 in.
M60A1	113.50 in.
Center of turret to front of gun (gun traversed 180 deg):	
M60	206.50 in.
M60A1	211.50 in.
Center of turret to rear of vehicle:	
M60	160 in.
M60A1	160 in.
Width, overall	143 in.
Height, overall:	
M60	126.5 in.
M60A1	128.28 in.
Height (ground to traveling lock):	
M60	77 in.
M60A1	77 in.
Height (vehicle above ground)	18.25 in.
Wheel base	166.72 in.
Armament:	
Primary:	
CANNON, 105MM GUN: M68	1
MOUNT, GUN: 105-mm, M116 (for M60 tank)	1
MOUNT, GUN: 105-mm, M140 (for M60A1 tank)	1
Secondary:	
MACHINE GUN, 7.62 MILLIMETER: M73	1
MACHINE GUN, CALIBER .50: M85	1
SUBMACHINEGUN, CALIBER .45: M3A1	2
Tracks, width	28 in.
Tread (center to center of track)	115 in.
Outside to outside of track	143 in.
Angle of approach	
Angle of departure	
Type of fuel	Diesel-Spec. VV-F-800
Center of gravity above ground	54.25 in.
Weight of vehicles:	
Crew and equipment:	
M60	102,000 lb
M60A1	106,000 lb
Empty:	
M60	98,000 lb
M60A1	97,000 lb
Length of track on ground	166.72 in.
Ground contact area—0-inch pentration	
Ground clearance	18.25 in.
Ground pressure:	
M60	11.1 psi
M60A1	11.8 psi
Pintle height (loaded)	
Electrical system	24 volt
Number of batteries	6
Type of batteries	6 TN
Generator, main	300 amp
Fuel cetane rating	40
Capacities:	
Fuel (total):	
M60	385 gal
M60A1	375 gal
Crankcase, refill (without cooler, cores, and lines)	12 gal
Transmission, cross-drive, refill (without cooler, cores, and lines)	17 gal
Final drives	8 qt
Brakes:	
M60	multiple disk, mechanical (foot pedal)
M60A1	multiple disk, hydraulic (foot pedal)
Transmission:	
Manufacturer	General Motors Corp (Allison Div)
Model:	
M60 tank	CD-850-6
M60A1 tank	CD-850-6A
Type	cross-drive, single stage
Ratio from torque converter output shaft to final drive flange:	
High range	4.3
Low range	12
Reverse range	16.9
Final reduction	5.08:1
Engine:	
Manufacturer	Continental
Model:	
M60 tank	AVDS-1790-2
M60A1 tank	AVDS-1790-2A
Type	90 deg, V-type, air-cooled, diesel
Number of cylinders	12
Bore:	
AVDS-1790-2	5.75 in.
AVDS-1790-2A	5.75 in.
Stroke:	
AVDS-1790-2	5.75 in.
AVDS-1790-2A	5.75 in.
Compression ratio:	
AVDS-1790-2	16:1
AVDS-1790-2A	16:1
Maximum governed speed (full load)	2.400 rpm
Brake horsepower, gross (max w/std accessories):	
AVDS-1790-2	750 @ 2.400 rpm
AVDS-1790-2A	
Torque, gross (max w/std accessories):	
AVDS-1790-2	1.710 lb-ft @ 1,800 rpm
AVDS-1790-2A	
Type of ignition	compression
Auxiliary engine-generator	none
Traversing and elevating mechanism	manual and hydraulic

AMMUNITION

105mm	63 rounds (M60A1), 57 rounds (M60)
7.62	5.950 rounds
Cal. .50	900 rounds
Cal. .45	360 rounds
Grenades	8

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot to infinity
Fording depth:	
W/o deep-water fording kit	48 in.
W/deep-water fording kit	96 in.
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	102 in.
Fuel consumption, average conditions	1.13 gpm
Allowable speed, recommended	30 mph
Maximum allowable towed load, gross	64.000 lb
Cruising range (20 mph on hard surface road)	310 mi

EQUIPMENT

Communications	radio and interphone
For M60 tank	AN/GRC-3 through -8 plus AN/VIA-4; AN/GRC-3 through -8 plus

AN/VRC-24 and AN/VIA-4; or AN/VRC-12, 46, 47, or AN/PRC-25. AN/VRC-12 or AN/VRC-12 plus AN/VRC-24 are optional.

For M60A1 tank --------AN/VRC-12, 46, 47, or AN/PRC-25 with AN/VRC-24.

Sighting and fire control **
CARD: range, tank (ORD dwg No. D8724207).
COMPUTER, BALLISTICS: M13A1D (for M60) or M13A2 (for M60A1).
DRIVE, BALLISTICS: M10 (for M60) or M10A4 (for M60A1).
FUZE SETTER: M27 (deleted).
INDICATOR, AZIMUTH: M28A1.
MOUNT, TANK PERISCOPE: M104A2.
MOUNT, TANK PERISCOPE: M115.
MOUNT, TELESCOPE: M114.
PERISCOPE, TANK: M24.
PERISCOPE, TANK: M27.
PERISCOPE, TANK: M31.
PERISCOPE, TANK: M37 (for M60A1).
POWER UNIT: assembly (ORD No. 8619600).
QUADRANT, FIRE CONTROL: gunner's M1A1, w/CASE, carrying.
QUADRANT, FIRE CONTROL: elevation, M13A1 (for M60) or M13A3 (for M60A1).
RANGE FINDER, FIRE CONTROL: M17C (for M60) or M17A1 (for M60A1).
SIGHT, INFINITY: M44C.
SIGHT, PERISCOPE: M28C.
TELESCOPE, ARTICULATED: M105C.

Basic Issue Items: See TM 9-2350-215-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 tank	M60	M60A1
Length		
Width		
Height		
Volume	3846.6 cu ft	
Area		
Gross weight		
Ship tons		

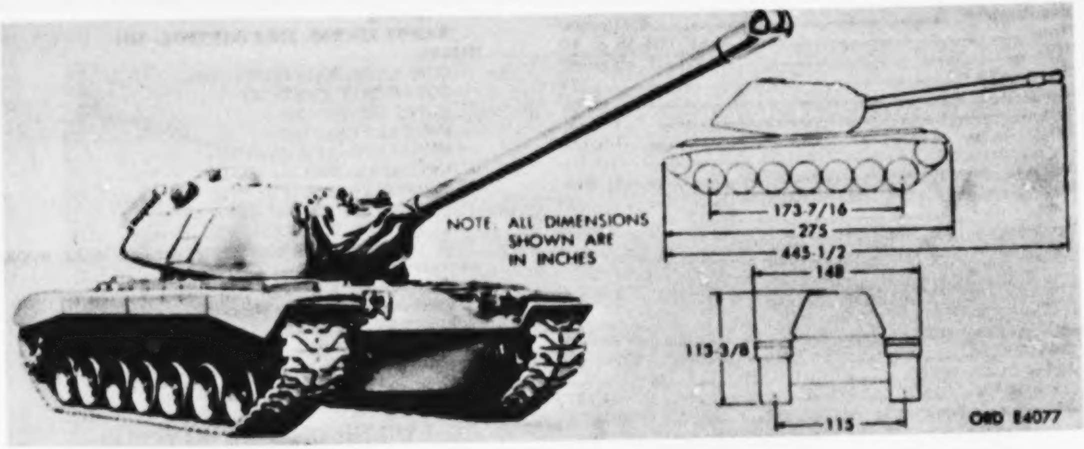
Outside Continental United States

Shipped 1 tank	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2350-215-10, TM 9-2350-215-20, TM 9-2350-215-20P, TM 9-2350-215-35/1, TM 9-2350-215-35/2, TM 9-2350-215-35P/1, TM 9-2350-215-35P/2.

** For characteristics and data, see items in sections 12, 14, 18, and 27.

TANK, COMBAT, FULL TRACKED: 120-MM GUN, M103 AND M103A1



Major Item

Model	*Line item No.*	*Federal stock No.*
M103, w/e	4-43995-10	2350-740-0800
M103A1, w/e	4-43995-01	2350-608-5603

General

TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 and M103A1, is fully armored, full-track-laying, low silhouette combat vehicle designed for direct assault and antitank mission. The vehicles are powered by 12-cylinder, air-cooled, 4-cycle 90° V-type engines. Power is transmitted to the final drives through cross-drive transmissions, which are combined transmissions, differential, steering and braking units.

The vehicles are supported by 14 road wheels with rollers supporting the rear driven track. The vehicles are equipped with 2 rubber block-type tracks driven from the rear of the vehicle by sprockets attached to the final drives.

The hull of the vehicles is a homogeneous armor steel casting with a welded armor steel plate floor and is divided into two compartments; the crew compartment (driving and fighting) and the power plant compartment (engine and transmission). The engine assembly is mounted in the center of the hull with the exhaust mufflers protruding from the hull deck of the rear of the turret. Major armament for the vehicles is a MACHINEGUN, CALIBER .30: M37* coaxially mounted with a 120-mm gun, M58.* Additional fire power is provided by a MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel,* mounted on the commander's cupola.

Differences among models

The M103A1 is similar in outward appearance to the M103 with the exception of a basket being attached to the turret of the M103A1.

The other modifications internal and relative to the turret and gun operations.

Data plate location

The data plate is located on a bracket on the hull wall in front of the instrument panel.

Classification:

M103	Standard B (OTCM 36841)
M103A1	Standard A (OTCM 36841)

CHARACTERISTICS

Crew	5
Length, overall	445½ in.
Length of vehicle	275 in.
Width, overall	148 in.
Height, overall	113⅜ in.
Wheel base	$173\frac{7}{16}$ in.
Armament:	
120-mm gun M58	1
MACHINEGUN, CALIBER .30: M37	1
MACHINEGUN, CALIBER .50: Browning, M2 heavy barrel	1
SUBMACHINEGUN, CALIBER .45: M3A1	1
CARBINE, CALIBER .30: M2 (Army only)	1
Tracks, width	
Type of fuel	
Tread (center to center of track)	
Outside to outside of track	
Angle of approach	
Angle of departure	
Center of gravity above ground	
Weight of vehicle:	
Crew and equipment	125,000 lb
Empty	117,000 lb
Length of track on ground	$173\frac{7}{16}$ in.
Ground contact area—0-inch penetration	
Ground clearance	15⅝ in.
Ground pressure	12.85 psi
Pintle height (loaded)	
Electrical system	
No. of batteries	4
Type of batteries	6-TN-12V
Fuel octane rating	80
Capacities:	
Fuel (total)	268 gal
Crankcase, refill (without cooler, cores, and lines)	72 qt
Transmission, cross-drive, refill (without cooler, cores, and lines)	
Final drive	
Brakes	multiple disk, mechanical foot pedal
Transmission:	
Manufacturer	
Model	CD-850-4A or 4B
Type	cross-drive
No. of ranges:	
Forward	2
Reverse	1
Ratio from torque converter output shaft to final drive flange:	
High range	4.5:1
Low range	13:1
Reverse range	17.8:1
Final reduction	7.077:1

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* For characteristics and data, see items in sections 2 and 4.

CHARACTERISTICS—Continued

Engine:

Manufacturer	Continental
Model	AV-1790-5B or 7C
Type	V-12, air-cooled
No. of cylinders	12
Displacement	1,790 cu in.
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	6.5:1
Maximum governed speed (full load)	21 mph
Brake horsepower, gross (max w/standard accessories)	810 at 2,800 rpm
Torque, gross (max w/std accessories)	1,600 ft-lb at 2,200 rpm
Type of ignition	magneto (4)

AMMUNITION

120-mm (separate loading)	33 rounds
Cal. .30 MG	5,250 rounds
Cal. .50 MG	1,000 rounds
Cal. .45 SMG	180 rounds
Cal. .30 carbine (Army only)	180 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot
Fording depth:	
w/o deep-water fording kit	48 in.
w/deep-water fording kit	to top of turret
Ma2ximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	90 in.
Fuel consumption (average conditions)	1/3 mpg
Maximum speed, recommended	21 mph
Cruising range (average conditions)	80 mi

EQUIPMENT

Communications:

Radio and interphone set	AN/GRC-3 through -8 series, or AN/VRC-47, AN/ARC-27, or AN/VRC-24, and AN/VIA-1

Sighting and Fire Control:*

M103:

- DRIVE, BALLISTICS: M6
- FUZE SETTER: M27
- INDICATOR, AZIMUTH: M30
- MOUNT, PERISCOPE: M106
- PERISCOPE: M17, M20A3, M24, and M26
- QUADRANT, FIRE CONTROL: elevation, M118
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/CASE, carrying
- RANGE FINDER, FIRE CONTROL: M14

M103A1:

- COMPUTER, BALLISTICS: M14
- CORRECTOR, CANT: M8
- DRIVE MOUNT: M9
- FUZE SETTER: M27
- INDICATOR, AZIMUTH: M28
- INVERTER: ORD No. 8608214
- MOUNT, TELESCOPE: M107
- PERISCOPE: M27 and M29
- QUADRANT, FIRE CONTROL: elevation, M118
- QUADRANT, FIRE CONTROL: gunners, M1A1, w/CASE, carrying
- RANGE FINDER, FIRE CONTROL: M15
- SERVOMECHANISM: M1
- SIGHT INFINITY: M44
- TELESCOPE: M102
- TRANSMITTER, SUPERELEVATION: M28

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped:

Length	
Width	
Height	
Volume	
Area	12.85 sq ft
Gross weight	
Ship tons	

Oversea Pack

Shipped:

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-256; TM 9-2350-206-12; TM 9-2350-206P; TM 9-2350-214-35P/2; TM 9-2350-24-35P/3.

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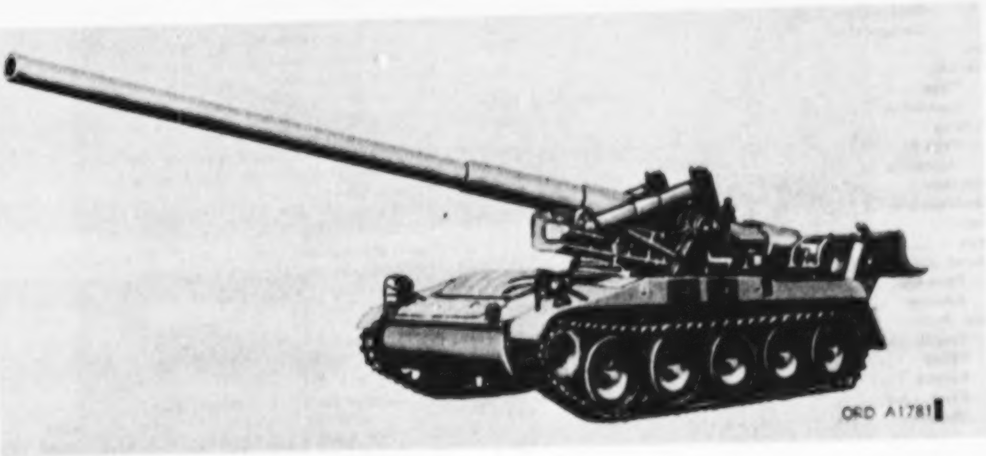
* For characteristics and data, see items in sections 12, 14 through 18, and 27.

[Next page is 23-37]

GUN, FIELD ARTILLERY, SELF-PROPELLED: 175-MM, M107 (T235E1)



Major item

Model	*Line item No.*	*Federal stock No.*
M107 (T235E1)	416995	2350-436-6635

General

GUN, FIELD ARTILLERY, SELF PROPELLED: 175-mm, M107 (T235E1), is a full-tracked vehicle, and provides a highly mobile and maneuverable, self-propelled weapon capable of being air transported in large cargo aircraft. It is designed to provide general artillery support to ground troops and close general support to armored columns. The M107 provides mobility for the CANNON, 175 MILLIMETER GUN: M113 (T236E3),* and gives protection to the infantry in offensive combat. The vehicle is a low, all-welded steel structure with no superstructure and with an independently operated turret and cannon mounted toward the rear of the vehicle. The turret houses the MOUNT, GUN-HOWITZER: M158,* which supports the cannon. The vehicle utilizes the torsion bar-type suspension system incorporating five pairs of individually sprung road wheels, and tracks. Rear road wheels, mounted on eccentric shafts are used to adjust the tension on the tracks of the vehicle. A hydraulically operated spade, mounted at the rear of the vehicle and the road wheel lockout cylinders provide stability during operation of the weapon. The cannon is retracted during travel.

Differences among models

Data plate location

The data plate is located in the driver's compartment.

Classification: Standard A (OTCM 37684).

CHARACTERISTICS

Crew	5
Length:	
Overall, gun in travel position	444.75 in.
Overall, cannon removed	254.25 in.
Width, overall	124 in.
Height:	
Overall, gun in travel position	136.75 in.
Hull	58.13 in.
Weight:	
Fighting	62,100 lb
Reduced for air transport:	
Less crew, stowage and fuel	56,600 lb
Less crew, stowage, fuel, and gun tube	42,800 lb
Armament:	
CANNON, 175 MILLIMETER GUN: M113 (T256E3)	1
MOUNT, GUN-HOWITZER: M158 (T185)	1
RAMMER AND LOADER ASSEMBLY (10898300)	1
MECHANISM, FIRING, CANNON: M35	1
Tracks:	
Type	flat, single pin, removable rubber pad
Model	T132 and T132E1
Width	18 in.
Tread (center-to-center)	106 in.
Outside-to-outside	124 in.
Length of track on ground	154.28 ± 1.5 in.
Ground contact area, 0 in. penetration	5554.08 sq in.
Ground contact (wheel base)	148.28 ± 1.5 in.
Center of front road wheel to center of rear road wheel	144 in.
Center of gravity above ground	49.3 in. and 99.4 in. from center line of sprocket
Ground clearance	17.38 in.
Ground pressure	11.6 psi
Pintle height	27.13 in.
Front of vehicle to center of vehicle	127⅛ in.
Front of gun to center of vehicle	322.625 in.
Electrical system:	
Volts, dc	24
Batteries:	
Number	4
Type	6 TN
Volts, each	12
Generator:	
Ampere rating	300
Model	30010-000
Manufacturer	Jack & Heintz
Intercommunication set	AN/UIC-1
Type of ground	single conductor circuit, negative bonded to hull
Capacities:	
Fuel tank	300 gal
Engine crankcase refill	26 qt
Transmission refill	14 gal
Final drive, each	1½ qt

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* For characteristics and data, see item in section 5.

Recoil mechanism:	
Oil required	15 gal
Reserve:	
Replenisher	2 pt
Recuperator	2 pt
Brakes:	
Service:	
Type	multiple wet plate
Operation	mechanical
Parking:	
Type	multiple wet plate
Operation	mechanical
Transmission:	
Manufacturer	Allison
Model	XTG-411-2A
Type	cross-drive
No. of speeds:	
Forward	4
Reverse	2
Gear ratio:	
Fourth (high)	.794:1
Third	1.58:1
Second	3.16:1
First (low)	4.69:1
Reverse:	
1	5.60:1
2	3.79:1
Final reduction	5.35:1
Differential-drive	planetary
Engine:	
Manufacturer	General Motors
Model	8V71T
Type	compression ignition, V, liquid-cooled, turbocharged, diesel
Displacement	568 cu in.
No. of cylinders	8
Bore	4.25 in.
Stroke	5 in.
Compression ratio	17:1
Max governed speed:	
No load	2,450 rpm
Full load	2,300 rpm
Idling speed	450 to 550 rpm
Max brake horsepower:	
Gross	405
Net	345
Torque, gross, max	980 lb/ft @ 1700 rpm
Ignition	compression
Fuel:	
Type	diesel
Cetane rating (minimum)	35
Traversing mechanism:	
Type	manual and hydraulic power
Turret traverse:	
Right	30 deg
Left	30 deg
Elevating mechanism:	
Type	manual and hydraulic power
Weapon mount motion:	
Elevation (max)	65 deg
Depression	+2 deg
Recoil mechanism:	
Type	hydro pneumatic
Equilibrator	hydro pneumatic
Type of recoil oil	MIL-H-6083

AMMUNITION

Type	175 mm
Loading	separate
Loading and ramming	hydraulic or manual
Main stowage	2 rounds

PERFORMANCE

Maximum grade ability	60 percent
Maximum slope:	
Angle of approach	30 deg
Angle of departure	42 deg
Turning radius, min	12 ft
Fording depth:	
w/o deep-water fording kit	42 in.
w/deep-water fording kit	none
Maximum vertical obstacle vehicle can climb	40 in.
Maximum width of ditch vehicle can cross	93 in.
Tractive effort:	
Maximum	49,680 lb
Recommended towed load, max	50,000 lb
Fuel consumption	1.5 mpg
Speed, maximum	34.4 mph
Cruising range	450 miles

EQUIPMENT

Communications:	
Intercommunication set	AN/UIC-1

Sighting and fire control:*
Installed on M107 prior to issue.
MOUNT, TELESCOPE: direct fire, M138
MOUNT, TELESCOPE: panoramic, M137 (T186E3)
Boxed and stowed on M107 prior to issue:
BINOCULAR: M17A1
FUSE SETTER: M26 and M27
LIGHT, INSTRUMENT: M52
PERISCOPE, TANK: M17
POST, AIMING: M1A2
QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
QUADRANT, FIRE CONTROL: gunner's, M1A1
REFLECTOR, AIMING POST: clear, M1
REFLECTOR, AIMING POST: red, M2
SCALE, GRAPHICAL FIRING:**
SCALE, GRAPHICAL FIRING: site**
TELESCOPE, ELBOW: direct fire, M116C
TELESCOPE, PANORAMIC: M115 (T146)
Basic Issue Items: See TM 9-2300-216-10

INSTRUCTIONAL MATERIAL

PROJECTILE, 175 MILLIMETER, DUMMY:**
CHARGE, PROPELLING, 175 MILLIMETER, DUMMY:**
PRIMER, PERCUSSION INERT:**

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 gun, uncrated	
Length	444.75 in.
Width	124.0 in.
Height	111.88 in.
Volume	3,600 cu ft
Area	383 sq ft
Gross weight	57,200 lb
Ship tons	90

Outside Continental United States

Shipped 1 gun, uncrated	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-216-10, TM 9-2300-216-20, TM 9-2300-216-20-P, TM 9-2300-216-35/1, TM 9-2300-216-35/2, TM 9-2300-216-35P/1, TM 9-2300-216-35P/2

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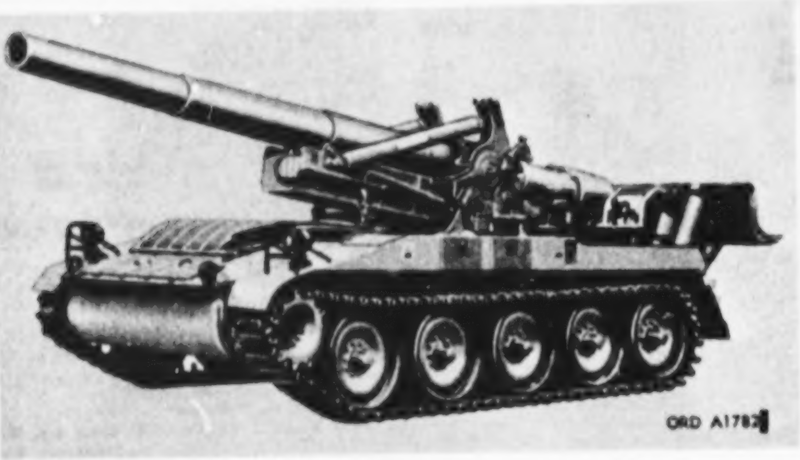
*For characteristics and data, see item in sections 5, 12, 14, 18, and 27.
**Type classification pending.

HOWITZER, HEAVY, SELF-PROPELLED: 8-INCH, M110 (T236E1)



ORD A1782

Major item

Model	*Line item No.*	*Federal stock No.*
M110 (T236E1)	418417	2350-439-6248

General

HOWITZER, HEAVY, SELF-PROPELLED: 8-inch, M110 (T236E1), is a full tracked vehicle, and provides a highly mobile and maneuverable, self-propelled weapon capable of being air transported in large cargo aircraft. It is designed to provide general artillery support to ground troops and close general support to armored columns. The M110 provides mobility for the CANNON, 8-INCH HOWITZER: M2A1E1,* and gives protection to the infantry in offensive combat. The vehicle is a low, all-welded steel structure with no superstructure and with an independently operated turret and cannon mounted toward the rear of the vehicle. The turret houses the MOUNT, GUN-HOWITZER: M158,* which supports the cannon. The vehicle utilizes the torsion bar-type suspension system incorporating five pairs of individually sprung road wheels, and tracks. Rear wheels, mounted on eccentric shafts are used to adjust the tension on the tracks of the vehicle. A hydraulically operated spade, mounted at the rear of the vehicle and the road wheel lockout cylinders provide stability during operation of the weapon.

Differences among models

Data plate location

The data plate is located in the driver's compartment.

Classification: Standard A (OTCM 37684).

CHARACTERISTICS

Crew	5
Length:	
Overall, gun in travel position	294.38 in.
Overall, cannon removed	224.25 in.
Width, overall	124 in.
Height:	
Overall, gun in travel position	115.60 in.
Hull	58.13 in.
Weight:	
Fighting	58,500 lb
Reduced for air transport:	
Less crew, stowage, and fuel	52,600 lb
Less crew, stowage, fuel, and gun cannon	41,960 lb
Armament:	
CANNON, 8-INCH HOWITZER: M2A1E1	1
MOUNT, GUN-HOWITZER: M158 (T158)	1
RAMMER AND LOADER ASSEMBLY (10898800)	1
MECHANISM, FIRING, CANNON: M35	1
Tracks:	
Type	flat, single pin, removable rubber pad
Model	T132 and T132E1
Width	18 in.
Tread (center-to-center)	106 in.
Outside-to-outside	124 in.
Length of track on ground	154.28 ± 1.5 in.
Ground contact area, O in. penetration	5554.08 sq in.
Ground contact (wheel base)	148.28 ± 1.5 in.
Center of front road wheel to center of rear road wheel	144 in.
Center of gravity above ground	46 in. and 95.5 in. from center of sprocket
Ground clearance	17.38 in.
Ground pressure	10.9 psi
Pintle height	37.18 in.
Height of gun	89.250 in.
Front of vehicle to center of vehicle	187¼ in.
Front of gun to center of vehicle	167.250 in.
Electrical system:	
Volts, dc	24
Batteries:	
Number	4
Type	6 TN
Volts, each	12
Generator:	
Ampere rating	300
Model	30010-000
Manufacturer	Jack & Heintz
Intercommunication set	AN/U1C-1
Type of ground	single conductor ciruit, negative bonded to hull
Capacities:	
Fuel tank	300 gal
Engine crankcase refill	26 qt

*For characteristics and data, see item in section 6.

Transmission refill	14 gal
Final drive, each	1½ qt
Recoil mechanism:	
Oil required	15 gal
Reserve:	
Replenisher	2 pt
Recuperator	2 pt
Brakes:	
Service:	
Type	multiple wet plate
Operation	mechanical
Parking:	
Type	multiple wet plate
Operation	mechanical
Transmission:	
Manufacturer	Allison
Model	XTG-411-2A
Type	cross-drive
No. of speeds:	
Forward	4
Reverse	2
Gear ratio:	
Fourth (high)	.794:1
Third	1.59:1
Second	3.18:1
First (low)	4.69:1
Reverse:	
1	5.60:1
2	3.79:1
Final reduction	5.35:1
Differential-drive	planetary
Engine:	
Manufacturer	General Motors
Model	8V71T
Type	compression ignition, V, liquid-cooled, turbocharged, diesel
Displacement	0.568 cu in.
No. of cylinders	8
Bore	4.25 in.
Stroke	5 in.
Compression ratio	17:1
Max governed speed:	
No load	2,450 rpm
Full load	2,300 rpm
Idling speed	550 to 600 rpm
Max brake horsepower:	
Gross	405
Net	345
Torque, gross, max	980 lb/ft @ 1700 rpm
Ignition	compression
Fuel:	
Type	diesel
Cetane rating (minimum)	35
Traversing mechanism:	
Type	manual and hydraulic power
Turret traverse:	
Right	30 deg
Left	30 deg
Elevating mechanism:	
Type	manual and hydraulic power
Weapon mount motion:	
Elevation (max)	65 deg
Depression	2 deg
Recoil mechanism:	
Type	hydropneumatic
Equilibrator	pneumatic
Type of recoil oil	MIL-H-6083, Type 1
Ammunition:	
Type	HE
Loading	separate
Loading and ramming	hydraulic or manual
Main stowage	2 rounds

PERFORMANCE

Maximum grade ability	60 percent
Maximum slope:	
Angle of approach	58 deg
Angle of departure	42 deg
Turning radius, min	12 ft
Fording depth:	
W/o deep-water fording kit	42 in.
W/deep-water fording kit	none
Maximum vertical obstacle vehicle can climb	40 in.
Maximum width of ditch vehicle can cross	93 in.
Tractive effort:	
Maximum	46,800 lb
Recommended towed load, max	50,000 lb
Fuel consumption	1.5 mpg
Speed, maximum	34.4 mph
Cruising range	450 miles

EQUIPMENT

Communications:	
Intercommunication set	AN/UIC-1

Sighting and fire control:**

Installed on M110 prior to issue:

MOUNT, TELESCOPE: direct fire, M138
MOUNT, TELESCOPE: panoramic, M137 (T186E3)

Boxed and stowed on M110 prior to issue:

BINOCULAR: M17A1
FUZE SETTER: M26 and M27
LIGHT, INSTRUMENT: M52
PERISCOPE, TANK: M17
POST, AIMING: M1A2
QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
QUADRANT, FIRE CONTROL: gunner's, M1A1
REFLECTOR, AIMING POST: clear, M1
REFLECTOR, AIMING POST: red, M2
SCALE, GRAPHICAL FIRING: M71
SCALE, GRAPHICAL FIRING: site, M72
TELESCOPE, ELBOW: direct fire, M116
TELESCOPE, PANORAMIC: M115 (T146)

Basic Issue Items: See TM 9-2300-216-10

INSTRUCTIONAL MATERIAL

CHARGE, PROPELLING, 8-INCH, DUMMY: M4
PRIMER, PERCUSSION INERT: MK2A4
PROJECTILE, 8-INCH, DUMMY: M14
PROJECTILE, 8-INCH, DUMMY: MK1

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 howitzer, uncrated	
Length	294.38 in.
Width	124 in.
Height	110 in.
Volume	2,320 cu ft
Area	253 sq ft
Gross weight	58,600 lb
Ship tons	58.00

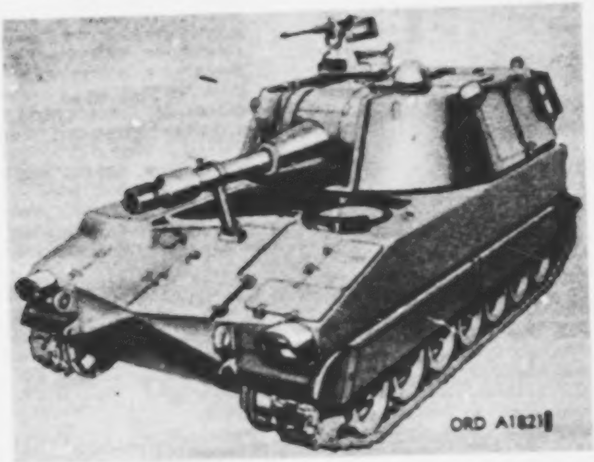
Outside Continental United States

Shipped 1 howitzer, uncrated	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 9-2300-216-10, TM 9-2300-216-20, TM 9-2300-216-20P, TM 9-2300-216-35/1, TM 9-2300-216-35/2, TM 9-2300-216-35P/1, TM 9-2300-216-35P/2

**For characteristics and data, see item in sections 12, 14, 18, and 27.

HOWITZER, LIGHT, SELF-PROPELLED: 105-MM, T195E1



Major item

Model	*Line item No.*	*Federal stock No.*
T195E1		2350-440-8810

General

HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, T195E1, is an armored, full-track-laying vehicle with individual torsion bar suspension. The M108 provides a self-propelled carriage for 105-mm howitzer with adequate mobility for direct support of combat teams employing armored personnel carriers and tanks. This vehicle is capable of Phase III Airborne Operations and will cross inland waterways with an inflated flotation device.

Differences among models

Data plate location

The data plate is located to the left of the driver's seat on the sponson.

Classification: Limited production (OTCM 37965).

Armament

CANNON, 105 MILLIMETER HOWITZER: XM103
MOUNT, HOWITZER: XM139
MACHINEGUN, CALIBER 50: Browning, M2, heavy barrel, flexible
LAUNCHER, ROCKET: M20A1B1
RIFLE: 7.62-mm, M14 (five)

CHARACTERISTICS

Crew	5
Length, overall	$240\frac{7}{16}$ in.
Width:	
Overall	$129\frac{5}{8}$ in.
Reducible overall (w/o finders)	124 in.
Height:	
Overall	$124\frac{1}{4}$ in.
Lowest operable height	110 in.
Tracks, width	15 in.
Center of front road wheel to center of rear road wheel	156 in.
Tread (center-to-center of track)	109 in.
Outside-to-outside of tracks	124 in.
Angle of approach	26 deg
Angle of departure	22 deg
Type of fuel (VV-F-800, DF-2)	diesel
Center of gravity above ground	48.0 in.
Weight of vehicle:	
Combat loaded	46,900 lb
Net (less crew, stowage, fuel)	40,100 lb
Length of track on ground	156 in.
Ground contact area (of track at zero penetration)	4,680 sq in.
Ground clearance	$17\frac{11}{16}$ in.
Ground pressure (combat loaded)	10.1 psi
Pintle height (loaded)	$19\frac{11}{16}$ in.
Height of trunnion above ground	78.2 in.
Front of vehicle to center of turret	$156\frac{1}{4}$ in.
Front of howitzer tube to center of turret	
Electrical system:	
No. of volts	24
Generators (alternator)	100 amperes
No. of batteries	4 (12 volt)
Type of batteries	6 TN
Fuel (minimum) (cetane rating)	35
Capacities:	
Fuel (total)	135 gal
Crankcase, refill	26 qt
Transmission refill)	14 gal
Final drive, each	2 qt
Brakes:	
Type	multiple wet plate
Operation	mechanical application
Transmission:	
Manufacturer	Allison Div., GMC
Model	XTG-411-2A
Type	X drive transverse
No. of ranges:	
Forward	4
Reverse	2
Final reduction	4.36:1
Communication system	Interphone
Suppressed for radio interference	yes
Engine:	
Manufacturer	Detroit Diesel Engine Div., GMC
Model	8V71T
Type	diesel, turbocharged, 2 stroke, liquid cooled
Displacement	568 cu in.
No. of cylinders	8
Bore	4.25 in.
Stroke	5 in.

Compression ratio	17:1
Brake horsepower, gross (w/max std accessories)	405 @ 2,300 rpm
Torque, gross (w/max accessories)	980 @ 1,700 rpm
Type of ignition	compression
Auxiliary engine generator model	none
Elevating mechanism	manual
Tracks steel model	
Tracks rubber model (removable rubber pads)	T137

AMMUNITION

105-mm	87 rounds
Cal. .50	500 rounds
Rocket 3.5 in.	6 rounds
7.62-mm	750 rounds
Hand grenades	12

PERFORMANCE

Maximum sustained speed on improved road with combat load:	
Level	35 mph (governed)
10 percent grade	12 mph
Minimum sustained speed	2.5 mph
Maximum grade ability (on prepared slopes)	60 percent
Turning radius	one vehicle length
Fording depth, swimming capabilities w/deep water fording kit	yes
Type of water propulsion	tracks
Speed in water	4.0 mph
Vertical obstacle vehicle can climb	21 in.
Width of ditch vehicle can cross	72 in.
Fuel consumption	1 gal per hour @ 500 rpm
Maximum allowable towed load, gross	
Cruising range (improved roads)	240 mi
Drawbar pull	37,520 lb

EQUIPMENT

Interphone:
Radio set AN/UIC-1 with five (5) outlets plus external interphone extension kit, Model C-988/C.
Sighting and Fire Control:*
BINOCULAR: M17A1
FUZE SETTER: M26 with case, carrying M66
FUZE SETTER: F27
MOUNT, TELESCOPE: direct fire, T206
MOUNT, TELESCOPE: panoramic, T208
PERISCOPE, TANK: M27
PERISCOPE, TANK: XM45
POST AIMING M1A2 w/cover, aiming post, M401
QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
QUADRANT, FIRE CONTROL: gunner's M1A1 w/case, carrying, M8
REFLECTOR, AIMING POST: M1 (clear) and M2 (red) w/case, carrying, M144
TELESCOPE, ELBOW: direct fire, T176E3
TELESCOPE, PANORAMIC: T177
Basic Issue Items: See TM 9-2350-217-10

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 howitzer uncrated per flat car.

Length	240.44 in.
Width	129.75 in.
Height	110 in.
Volume	1,897.9 cu ft
Area	
Gross weight	45,412 lb
Ship tons	47.45

Outside Continental United States

Shipped 1 howitzer uncrated per flat car.

Length	240.44 in.
Width	129.75 in.
Height	110 in.
Volume	1,897.9 cu ft
Area	
Gross weight	45,412 lb
Ship tons	47.45

References: TM 9-2350-217-10, TM 9-2350-217-20, TM 9-2350-217-20P, TM 9-2350-217-35P/2, TM 9-2350-217-35/2, TM 9-2350-217-35/1

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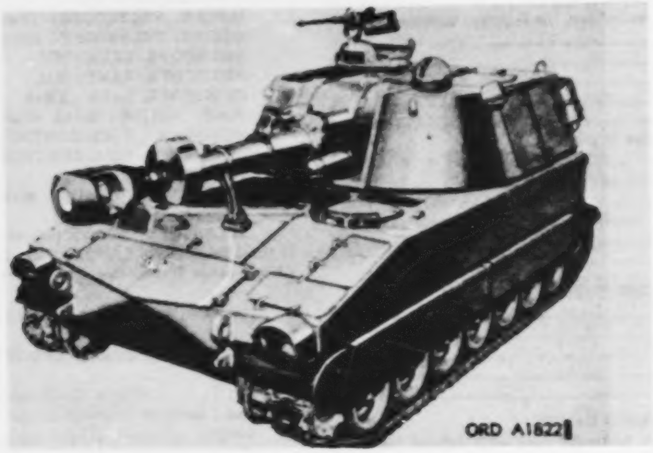
*For characteristics and data, see item in sections 14, 18, and 27.

HOWITZER, MEDIUM, SELF-PROPELLED: 155-MM, M109 (T196E1)



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Model	*Major item Line item No.*	*Federal stock No.*
M109 (T196E1)	4-1842-315	2350-440-8811

General

HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, M109 (T195E1), is an armored, full-track-laying vehicle with individual torsion bar suspension. The M109 (T196E1) provides a self-propelled carriage for the 155-mm howitzer with adequate mobility to support a division with combat teams transported in armored personnel carriers and tanks. This vehicle is capable of phase III airborne operations and will cross inland waterways with an inflated flotation device.

Differences among models

Data plate location:

Vehicle nameplate is located in the driver's compartment.

Classification: Standard A (AMCTCM item 1196)

CHARACTERISTICS

Crew: Six consisting of:

- Chief of section
- Driver
- Gunner
- No. 1 man
- Two cannoneers

Length, overall:	
w/armament	260.38 in.
w/o armament	240.68 in.
Width:	
Overall	129.75 in.
Reducible overall (w/o fenders)	124 in.
Height:	
Overall (max service ready)	120.43 in.
Lowest operable height	109.93 in.

Armament:

- CANNON, 155-MM, HOWITZER: M126 (T255E3)
- MOUNT, HOWITZER: M127
- MACHINEGUN, CALIBER .50 Browning, M2, heavy barrel, flexible
- LAUNCHER, ROCKET: M20-series for 3.50-inch rocket
- RIFLE: 7.62-mm, M14 (six)

Tracks, width	15 in.
Center of front road wheel to center of rear road wheel	156 in.
Tread (center-to-center of tracks)	109 in.
Outside-to-outside of tracks	124 in.
Angle of approach	26 deg
Angle of departure	22 deg
Type of fuel (VV-F-800)	diesel
Center of gravity above ground	45.0 in.
Weight of vehicle:	
Crew and equipment	52,461 lb
Net (less crew, stowage, fuel)	43,500 lb
Length of track on ground	156 in.
Ground contact area (of track as zero penetration)	4,680 sq in.
Ground clearance	17.69 in.
Ground pressure (combat loaded)	10.9 psi
Pintle height (loaded)	19.12 in.
Height of howitzer (clearance of trunnions)	77.6 in.
Front of vehicle to center of turret	161.19 in.
Front of howitzer muzzle brake to center of turret	198.8 in.
Electrical system:	
No. of volts	24
Generators (alternators)	100 amperes
No. of batteries	4 (12-volt)
Type of batteries	6 TN
Fuel cetane rating (min)	40
Capacities:	
Fuel (total)	135 gal
Crankcase, refill	(approx) 28 qt
Transmission, refill	12 gal
Final drive, each	(approx) 4 qt
Brakes:	
Type	multiple wet plate
Operation	mechanical application
Transmission:	
Manufacturer	Allison Div.—GMC
Model	XTG-411-2A
Type	X-drive transverse
No. of ranges:	
Forward	4
Reverse	2
Final reduction	4.86:1
Communication system	interphone
Suppressed for radio interference	yes

CHARACTERISTICS—Continued

Engine:

Manufacturer	Detroit Diesel Engine Div.—GMC
Model	8V71T
Type	diesel, turbocharged, two-stroke, liquid-cooled, V8
Displacement	567.5 cu in.
Number of cylinders	8
Bore	4.25 in.
Stroke	5.00 in.
Compression ratio	17:1
Brake, horsepower, gross (max w/std accessories)	405 @ 2,350 rpm
Torque, gross (max w/std accessories)	980 @ 1,700 rpm
Type of ignition	compression
Auxiliary engine generator (model)	none
Elevation mechanism	power and manual
Tracks, double pin	removable rubber pad (T136)

AMMUNITION

155-mm	28 rds
Cal. .50	500 rds
Rocket 3.5-in.	6 rds
7.62-mm	900 rds
Hand grenades	12

PERFORMANCE

Maximum sustained speed on improved road with combat load:

Level	35 mph
10 percent grade	12 mph
Minimum sustained speed	2.5 mph
Maximum grade ability (on prepared slopes)	60 percent
Turning radius	one vehicle length
Fording depth, swimming capability with deep water fording kit	
Type of water propulsion	tracks
Speed in water	4.0 mph
Vertical obstacle vehicle can climb	21 in.
Width of ditch vehicle can cross	72 in.
Fuel consumption	1 gal per hour @ 500 rpm
Maximum allowable towed load, gross	
Cruising range (improved roads)	220 mi
Drawbar pull	40,880 lb

EQUIPMENT

Interphone:

Radio set AN/UIC-1 with five outlets plus external interphone extension kit, Model C-988/C.

Sighting and fire control*:

- BINOCULAR: M17A1 (authorized separately by TOE)
- FUZE SETTER: M26 w/case, carrying M66
- FUZE SETTER: M27
- MOUNT, TELESCOPE: direct fire, M146 (T206)
- MOUNT, TELESCOPE: panoramic, M145 (T208)
- PERISCOPE, TANK: M27
- PERISCOPE, TANK: M42
- PERISCOPE, TANK: XM45
- POST, AIMING: M1A2 w/cover, aiming post, M401
- QUADRANT, FIRE CONTROL: elevation, M15 (T23E2)
- QUADRANT, FIRE CONTROL: gunner's, M1A1 w/case, carrying, M82
- REFLECTOR, AIMING POST: M1 (clear) and M2 (red) w/case, carrying, M144
- TELESCOPE, ELBOW: direct fire, M118C (T176E2)
- TELESCOPE, PANORAMIC: M117 (T177)

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 howitzer uncrated flatcar.

Length	240.44 in.
Width	129.75 in.
Height	110.00 in.
Volume	1,897.9 cu ft
Gross weight	49,396 lb
Ship tons	47.45

Outside Continental United States

Shipped 1 howitzer uncrated flatcar.

Length	240.44 in.
Width	129.75 in.
Height	110.00 in.
Volume	1,897.9 cu ft
Gross weight	49,396 lb
Ship tons	47.45

References: LO 9-2350-217-12, TM 9-2350-217-20, TM 9-2350-217-35/1, TM 9-2350-217-35P/2, TM 9-2350-217-10, TM 9-2350-217-20P, TM 9-2350-217-35/2.
GENERATOR (Alternator)—TM 9-2920-225-35, TM 9-2920-225-35P.

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*For characteristics and data, see item in sections 14, 18, and 27.

TANK, COMBAT, FULL TRACKED: FLAMETHROWER, M67 and M67A1

(Illustration will be added at a later date)

Major Item

Model	*Line item No.*	*Federal stock No.*
M67		2350-838-1910
M67A1	4-43990-00	2350-663-2664

General

TANK, COMBAT, FULL TRACKED: flamethrower, M67 and M67A1, is a medium armored full-track-laying, low silhouette combat vehicle designed for anti-personnel missions. The tank M67 consists of a FLAMETHROWER, MECHANIZED, MAIN ARMORED TURRET-MOUNTED, M7-6* mounted on the modified hull of a TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1.** The tank M67A1 consists of a FLAMETHROWER, M7A1-6* mounted on a modified hull of a tank M48A2.** Each flamethrower replaces the 90-mm gun in the tank M48A1 or M48A2.

Differences among models

The M67 contains the FLAMETHROWER, M7-6 while the M67A1 contains the FLAMETHROWER, M7A1-6.

Data plate location

The vehicle data plate is located on a bracket directly above the brake pedal.

Classification

M67	Standard B for USMC use only (AMCTC 128)
M67A1	Standard A for Army use only (OTCM 37119)

CHARACTERISTICS

Crew	3
Length, overall	
M67 (flamethrower gun in firing position)	324¼ in.
M67A1 (flamethrower gun, M6 in firing position)	320⅝ in.
Length of vehicle:	
M67	274⅜ in.
M67A1	270½ in.
Front of flamethrower gun to center of flamethrower turret	160½ in.
Front of vehicle to center of flamethrower turret	110⅝ in.
Length, overall (flamethrower gun in traveling position):	
M67	274⅝ in.
M67A1	271⅛ in.
Front of flamethrower gun to center of turret:	
M67	
M67A1	
Center of turret to rear of vehicle:	
M67	163¾ in.
M67A1	159⅞ in.
Width, overall	143 in.
Height, overall	121⅝ in.
Wheel base	157½ in.
Height, above ground	
Armament:	
FLAMETHROWER:	
M67	M7-6
M67A1	M7A1-6
MACHINEGUN, CALIBER .30:	
Browning, M1919A4E1 or M37	1
MACHINEGUN, CALIBER .50:	
Browning, M2, heavy barrel	1
Tracks, width	28 in.
Tread (center-to-center of tracks)	115 in.
Outside to outside of track	143 in.
Angle of approach	36 deg
Angle of departure	31 deg
Type of fuel	gasoline
Center of gravity above ground	
Weight of vehicle:	
Combat loaded:	
M67	104,790 lb
M67A1	105,790 lb
Less crew, fuel, and storage:	
M67	99,975 lb
M67A8	100,975 lb
Length of track on ground	157½ in./track
Ground contact area — O inch penetration	8,820 sq in
Ground clearance	15⅛ in.

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*Responsibility of the Chemical Corps.

**For characteristics and data, see item on pages 23-28 and 23-29.

Ground pressure:	
M67	11.9 psi
M67A1	12.0 psi
Pintle height (loaded)	31⅝ in.
Fender height (ground to top):	
M67	57⅞ in.
M67A1	58⅝ in.
Electrical system	24 volts
No. of batteries	4 (12 volts)
Type of batteries	6 TN
Fuel octane rating:	
M67	80
M67A1	83
Capacities:	
Fuel for engine:	
M67	215 gal
M67A1	335 gal
Fuel for flamethrower:	
Fuel and pressure unit	380 gal
Compressed air at 3000 psi	10 cu ft
Secondary fuel container	10.2 gal gas
Crankcase, refill (w/o cooler, cores, and lines)	64 qt
Transmission, cross-drive, refill (w/o cooler, cores, and lines)	92 qt
Final drive	
Brakes	wet, multiple disk
Transmission:	
Manufacturer	General Motors Corp. (Allison Div.)
Model	CD-850-5
Type	cross-drive
Number of ranges:	
Forward	2
Reverse	1
Final reduction:	
Low	10.86:1
High	1.08:1
Rev	15.19:1
Communication system	Interphone
Engine:	
Manufacturer	Continental
Model:	
M67	AVL-1790-7
M67A1	AVI-1790-8
Type	V-type, 4-cycle, air-cooled
Displacement	1,791 cu in
Number of cylinders	12
Bore	5.75 in.
Compression ratio	6.5:1
Maximum governed speed (full load)	2,800 rpm
Brake horsepower, gross (max w/std accessories)	810 @ 2,800 rpm
Torque, gross (max w/std accessories):	
M67	1580 lb ft @ 2,200 rpm
M67A1	1610 lb ft @ 2,200 rpm
Type of ignition	magneto
Auxiliary engine-generator	GMC-A41-2
Traversing and elevating system	manual and hydraulic

AMMUNITION

Cal. .30	3,500 rounds
Cal. .50	600 rounds

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot to infinity
Fording depth:	
W/o deep-water fording kit	4 ft
W/deep-water fording kit	8 ft
Maximum vertical obstacle vehicle can climb	36 in.
Maximum width of ditch vehicle can cross	102 in.
Fuel consumption (average conditions)	0.47 mpg
Maximum speed, recommended	31.8 mph
Cruising range (average conditions):	
M67	100 mi
M67A1	160 mi
W/jettison fuel tanks	250 mi

EQUIPMENT

Communications:	
Interphone	extension kit, AN/VIA-1, AN/VIA-4
Radio set	AN/GRC-3, 4, 7, or 8
Auxiliary	

Sighting and Fire Control***
M67A1:
MOUNT, TANK PERISCOPE: M113
PERISCOPE: XM30
Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

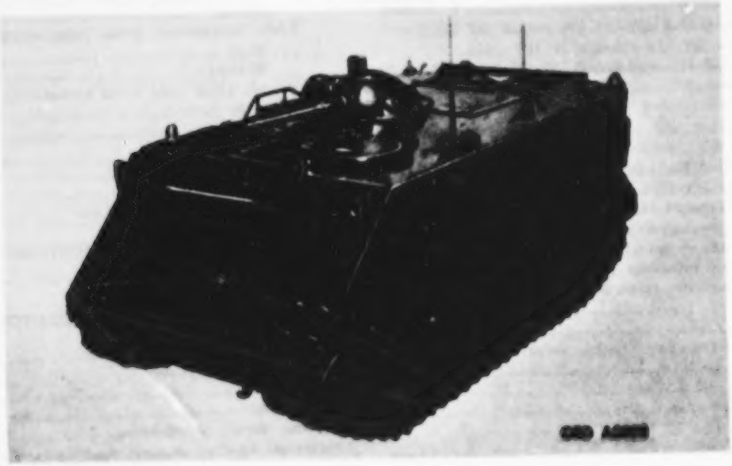
Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: TM 3-500, TM 3-1040-206-10, TM 3-1040-206-20, TM 3-1040-206-30, TM 3-1040-206-45, TM 3-1040-206-20P, TM 3-1040-206-30P, TM 3-1040-206-45P, TM 9-2350-208-20P, TM 9-7012, TM 9-7022; LO 3-1040-206-10, TM-02392A-15 (USMC)

***For characteristics and data, see item in section 14.

FLAME THROWER, SELF-PROPELLED: M132 AND M132A1



Model	*Line item No.*	*Federal stock No.*
M132		2350-987-8900
M132A1		2350-056-6809

General

FLAME THROWER, SELF-PROPELLED: M132 AND M132A1, is basically CARRIER, PERSONNEL, FULL TRACKED: armored, M113 (T113E2)* modified for use as a highly mobile flame thrower by addition of FLAME THROWER, M10-8. The vehicles are amphibious and can cross lakes and streams. The M132 and M132A1 retain the general operating characteristics of the M113 Carrier and are air transportable to using forces.

Differences among models:

The M132A1 is equipped with a diesel engine, and TX100-1 transmission, instead of a gasoline engine, and T-200-23 transmission, as in the M132.

Data plate location

Classification:

M132 —Standard B (AMCTCM W-740)
M132A1—Standard A (AMCTCM W-740)

CHARACTERISTICS

Crew	2
Length overall:	
M132 (flame thrower gun in firing position)	191½ in.
M132A1 (flame thrower gun in firing position)	191½ in.
Length of vehicle:	
M132	191½ in.
M132A1	191½ in.
Front of vehicle to center of flame thrower turret	91½ in.
Length overall (flame thrower gun in traveling position):	
M132	191½ in.
M132A1	191½ in.
Front of flame thrower gun to center of turret:	
M132	64 in.
M132A1	64 in.
Center of turret to rear of vehicle:	
M132	100 in.
M132A1	100 in.
Width overall	105⅝ in.
Height overall	95¾ in.
Wheelbase	105 in.
Height, above ground	16⅛ in.
Armament:	
FLAME THROWER	M10-8
MACHINEGUN, 7.62-MILLIMETER	M73
Tracks, width	15 in.
Tread (center-to-center of tracks)	84 in.
Outside to outside of track	100 in.
Type of fuel:	
M132	gasoline
M132A1	diesel
Center of gravity, above ground	39½ in.
Weight of vehicle:	
Gross (combat loaded):	
M132	23,330 lb
M132A1	23,895 lb
Net:	
M132	22,650 lb
M132A1	23,415 lb
Air transported:	
M132	20,430 lb
M132A1	20,885 in.
Length of track on ground	105 in.
Ground contact area—0-inch penetration:	
M132	7.4 psi
M132A1	7.6 psi
Ground clearance	16 in.
Ground pressure:	
M132:	
Combat loaded	7.5 psi
Net weight	7.3 psi
M132A1:	
Combat loaded	7.6 psi
Net weight	7.5 psi
Pintle height (loaded)	26.5 in.
Fender height (ground to top):	
M132	40 in.
M132A1	40 in.

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*For characteristics and data, see item in section 21.

CHARACTERISTICS—Continued

Electrical system:	
No. of batteries	2 (series)
Type of batteries	6 TN (12v)
Fuel rating:	
M132 (octane)	88 to 91
M132A1 (cetane)	40
Capacities:	
Refill:	
Fuel for engine:	
M132 (tank)	85 gal
M132A1	95 gal
Fuel for flame thrower:	
Fuel and pressure unit	
Compressed air at psi	cu ft
Secondary fuel container	
Crankcase, refill (w/o cooler, cores, and lines):	
M132	(approx) 9 qt
M132A1	(approx) 18 qt
Transmission, cross-drive, (w/o cooler, cores, and lines):	
M132	12 qt
M132A1	12 qt
Final drive (each)	1½ qt
Brakes:	
M132	differential band
M132A1	differential band and disc
Transmission:	
Manufacturer	Allison Div.—GMC
Model:	
M132	TX 200-23
M132A1	TX 100-1
Type	single stage, multiphase
Number of ranges:	
Forward:	
M132	6
M132A1	4
Reverse:	
M132	1
M132A1	1
Final reduction:	
Low:	
M132	5.296:1
M132A1	3.81:1
High:	
M132	1:1
M132A1	1:1
Reverse:	
M132	6.042:1
M132A1	4.35:1
Communication system	interphone
Engine:	
Manufacturer:	
M132	Chrysler Corp.
M132A1	Detroit Diesel Engine Div.—GMC
Type:	
M132	overhead valve, 90°, V-8
M132A1	two-cycle, diesel, V-6
Displacement:	
M132	361 cu in.
M132A1	318.6 cu in.
Number of cylinders:	
M132	8
M132A1	6
Bore:	
M132	4.125 in.
M 132A1	3.875 in.
Compression ratio:	
M132	7.8:1
M132A1	21:1
Maximum governed speed (full load):	
M132	3,900 rpm
M132A1	2,800 rpm
Brake horsepower, gross (max w/std accessories):	
M132	215 @ 4,000 rpm
M132A1	210 @ 2,800 rpm
Torque, gross (min w/std accessories):	
M132	302 lb-ft @ 2,800 rpm
M132A1	425 lb-ft @ 1,500 rpm
Type of ignition:	
M132	battery
M132A1	compression ignition
Traversing and elevating system	mechanical

AMMUNITION

7.62-mm	2,000 rds

PERFORMANCE

Maximum grade ability	60 percent
Minimum turning radius:	
M132	22.8 ft
M132A1	22.7 ft, w/pivot steer 12.8 ft
Fording depth (amphibious)	unlimited
Maximum vertical obstacle vehicle can climb	2 ft
Maximum width of ditch vehicle can cross	5 ft, 6 in.
Fuel consumption (average conditions):	
M132	(approx) 2½ mpg
M132A1	(approx) 3.4 mpg
Maximum speed recommended	35 mph
Cruising range (average conditions):	
M132	(approx) 200 miles
M132A1	(approx) 300 miles

EQUIPMENT

Communications:	
Radio set (on rack, left wall)	AN/VRC-47

Sighting and fire control**:

MOUNT, PERISCOPE: M104A2

PERISCOPE: M17

PERISCOPE: M19

PERISCOPE: M28D (in lieu of M28C)

PLATE: INSTRUCTION (8724207)

Basic Issue Items:

See TM 9-2300-224 10/3/4, TM 9 2300-224-10—(M132)

See TM 9-2300-224-10/2/1, TM 9-2300-224-10/3/4—(M132A1)

INSTRUCTIONAL MATERIAL

CARTRIDGE, 7.62-MM, DUMMY: NATOM63

GRAPHIC TRAINING AID:

(Above item, when available, will be listed in DA Pam 310-5.)

FIRING ATTACHMENT, BLANK AMMUNITION: M73 M.G.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 flame thrower uncrated per flatcar.

Length	191½ in.
Width	105¾ in.
Height	95⅝ in.
Volume	1,123 cu ft
Area	141 sq ft
Gross weight:	
M132	19,840 lb
M132A1	20,265 lb
Ship tons	28.08

**For characteristics and data, see item in section 27.

STORAGE AND SHIPPING DATA—Continued

Outside Continental United States

Shipped 1 flame thrower uncrated.

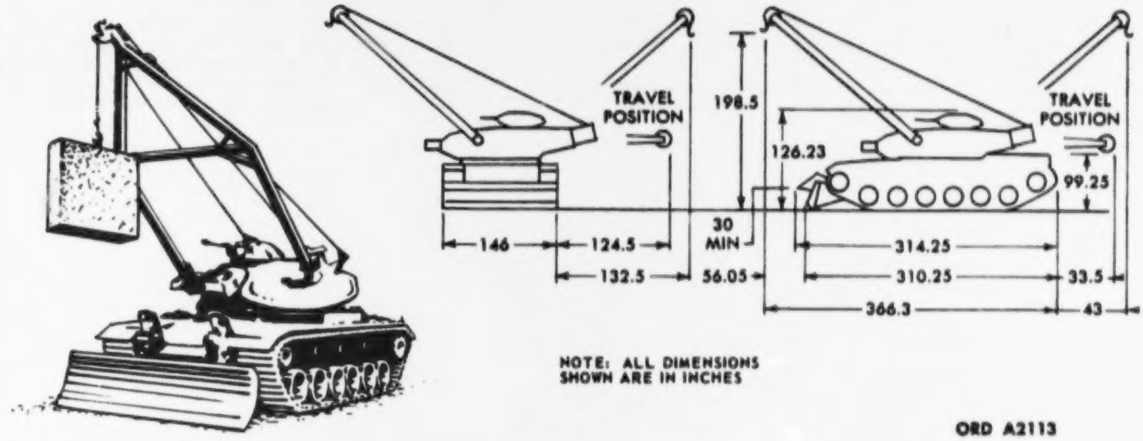
Length	190 in.
Width	100 in.
Height	90 in.
Volume	989.60 cu ft
Area	132 sq ft
Gross weight:	
M132	19,840 lb
M132A1	20,265 lb
Ship tons	27.74

References:

M132: LO 9-2300-224-12, TM 3-1040-209-12, TM 3-1040-209-20P, TM 3-1040-209-35, TM 3-1040-209-35P, TM 9-2300-224-10, TM 9-2300-224-10/3/4, TM 9-2300-224-20, TM 9-2300-224-20/3/4, TM 9-2300-224-20P/3, TM 9-2300-224-34/3, TM 9-2300-224-35P/3.

M132A1: LO 9-2300-224-12/2, TM 3-1040-209-12, TM 3-1040-209-20P, TM 3-1040-209-35, TM 3-1040-209-35P, TM 9-2300-224-10/2/1, TM 9-2300-224-10/3/4, TM 9-2300-224-20/2/1, TM 9-2300-224-20/3/4, TM 9-2300-224 20P/3, TM 9-2300-224-34/3, TM 9-2300-224-35P/3.

VEHICLE, COMBAT ENGINEER, FULL TRACKED: 165-MM GUN, M728 (T118E1)



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

ORD A2113

Model	*Line item No.*	*Federal stock No.*
M728 (T118E1)	E56577	2350-795-1797

General

VEHICLE, COMBAT ENGINEER, FULL TRACKED: 165-MM GUN, M728 (T118E1), is designed to provide maximum ballistic protection for the crew. The vehicle is heavily armed, being a basic M60A1 TANK*, modified to provide a mobile and maneuverable weapon for combat support of ground troops and vehicles. It is equipped with a hydraulically operated bulldozer mounted to the front of the hull. A winch and boom are mounted to the turret for lifting, carrying, and winching. The vehicle is used for breaching, obstacle removal, transportation of demolition teams, and pioneering operations.

Differences among models

Data plate location:

The data plate is located on a bracket above the brake pedal.

Classification: Limited production (AMCTC item 270).

CHARACTERISTICS

Crew	4 (commander, driver, gunner, and loader)
Length (with boom and bulldozer in travel position)	347.55 in.
Length (with boom in erected position)	366.30 in.
Width (with bulldozer installed)	146 in.
Height (lowest operable)	128.23 in.
Height of lifting hook	198.5 in.
Armament:	
Primary:	
CANNON, 165-MILLIMETER, GUN: XM135	
MOUNT, COMBINATION GUN: XM150	
Secondary:	
MACHINEGUN, 7.62-MILLIMETER: M73	
MACHINEGUN, CALIBER .50: M85	
Other:	
SUBMACHINEGUN, CALIBER .45: M3A1	2
Tracks:	
Width	28 in.
No. of shoes per track	80
Type	T97E2
Pitch	6-15/16 in.
Suspension type	individual torsion bar
Road wheels:	
No.	24
Size	26 x 6 in.
Tread (center-to-center of track)	115 in.
Outside to outside of track	143 in.
Wheelbase	
Angle of approach	
Angle of departure	
Type of fuel	Diesel Spec VV-F-800
Center of gravity above ground	54.25 in.
Weight of vehicle:	
Gross (combat loaded)	15,000 lb
Net (less crew, stowage, and fuel)	107,000 lb
Length of track on ground	166.72 in.
Ground contact area (0-inch penetration)	
Ground clearance	18.25 in.
Ground pressure	12.2 psi
Pintle height (loaded)	
Electrical system:	
Voltage	24 dc
Number of batteries	6
Type of battery	6 TN
Generator, main	300 amp
Fuel cetane rating	40
Capacities:	
Hydraulic reservoir:	
Boom, winch, and bulldozer (fill)	200 qt
Boom, winch, and bulldozer (refill)	192 qt
Fuel tanks (total)	375 gal
Transmission:	
Fill	92 qt
Refill	68 qt

---

*For characteristics and data, see item in section 23.

CHARACTERISTICS—Continued

Brakes:	
Type	multiple disc, wet plate
Operation	hydraulic-linked foot pedal
Transmission:	
Manufacturer	General Motors Corp. (Allison Div.)
Model	CD-850-6A
Type	cross drive, hydraulic torque converter, and planetary gearing.
Overall gear ratio:	
Input	1.16:1
Low range	3.47:1
High range	1.25:1
Reverse range	4.90:1
Maximum converter multiplication	3.6:1
Final reduction	5.08:1
Drive ranges	low, high, and reverse
Engine:	
Manufacturer	Military engine (Continental)
Model	AVDS-1790-2A
Type	12 cyl, 90 deg, V-type, air-cooled, diesel
Bore	5.75 in.
Stroke	5.75 in.
Compression ratio	16:1
Maximum governed speed (full load)	2,400 rpm
Brake horsepower, gross (max w/std accessories)	750 @ 2,400 rpm
Torque, gross (max w/std accessories)	1,710 lb-ft @ 1,800 rpm
Type of ignition	compression
Auxiliary engine-generator	none
Traversing and elevating mechanism	manual and hydraulic
Boom and winch system:	
Boom:	
Type	tubular A-frame
Traverse	360 deg
Controls	hydraulic
Winch:	
Capacity, 1st wrap	25,000 lb
Speed, 4th wrap	30 fpm
Type	gear, two-speed, hydraulically operated
Cable:	
Size	¾ in. diam
Length	200 ft
Lifting capacity (in all erected positions w/single line, 4th wrap cable)	17,500 lb

AMMUNITION

165-mm	30 rds
Cal. .50	(min) 600 rds
7.62-mm	(min) 2,000 rds
Cal. .45	360 rds
Grenades	12

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivot to infinity
Fording depth:	
w/o deep water fording kit	(max) 48 in.
w/deep water fording kit	96 in.
Maximum vertical wall vehicle can climb	30 in.
Maximum width of trench vehicle can cross	96 in.
Fuel consumption, average conditions	1.13 mpg
Allowable speed recommended	30 mph
Cruising range (20 mph)	280 mi
Bulldozer system:	
Controls	hydraulic
Angle of moldboard cutting edge (with horizontal):	
Float position	60 deg
Lowest position	60 deg
Relation of moldboard cutting edge to ground level:	
Lowest position	10 in. below
Highest position	30 in. above
Carrying position	29 in. above
Rate of lift:	
At engine speed of 1,100 rpm	2.5 ips

EQUIPMENT

Communications:

Radio sets .... AN/VRC-53, AN/GRC-125, or AN/VRC-46

Sighting and fire control:**

- PERISCOPE, TANK: M27 (driver's)
- PERISCOPE, TANK: M24 (driver's)
- PERISCOPE, TANK: M34 (commander's)
- PERISCOPE, TANK: M36 (commander's, infrared)
- MOUNT, TANK PERISCOPE: M119 (commander's)
- PERISCOPE, TANK: M32C (gunner's, day, or infrared)
- MOUNT, PERISCOPE: M118 (gunner's)
- TELESCOPE: M105F (gunner's)
- MOUNT, TELESCOPE: M114
- PERISCOPE, TANK: M37 (loader's)
- SIGHT, INFINITY: 8635466
- QUADRANT, FIRE CONTROL: elevation, M13A3
- INDICATOR, AZIMUTH, MECHANICAL: M28E2
- QUADRANT, FIRE CONTROL: gunner's, M1A1, w/case
- BINOCULAR: M18 (infrared)

Basic Issue Items: See TM 9-2350-222-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 vehicle uncrated per flatcar.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 vehicle uncrated per flatcar.

Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: LO 9-2350-222-12, TM 9-2350-222-ESC, TM 9-2350-10, TM 9-2350-222-20, TM 9-2350-222-25P, TM 9-2350-222-25P, TM 9-2350-222-35/1, TM 9-2350-222-35/2.

**For characteristics and data, see item in sections 14, 18, and 27.

SECTION 24

TRACTORS, TRACK LAYING, HIGH SPEED

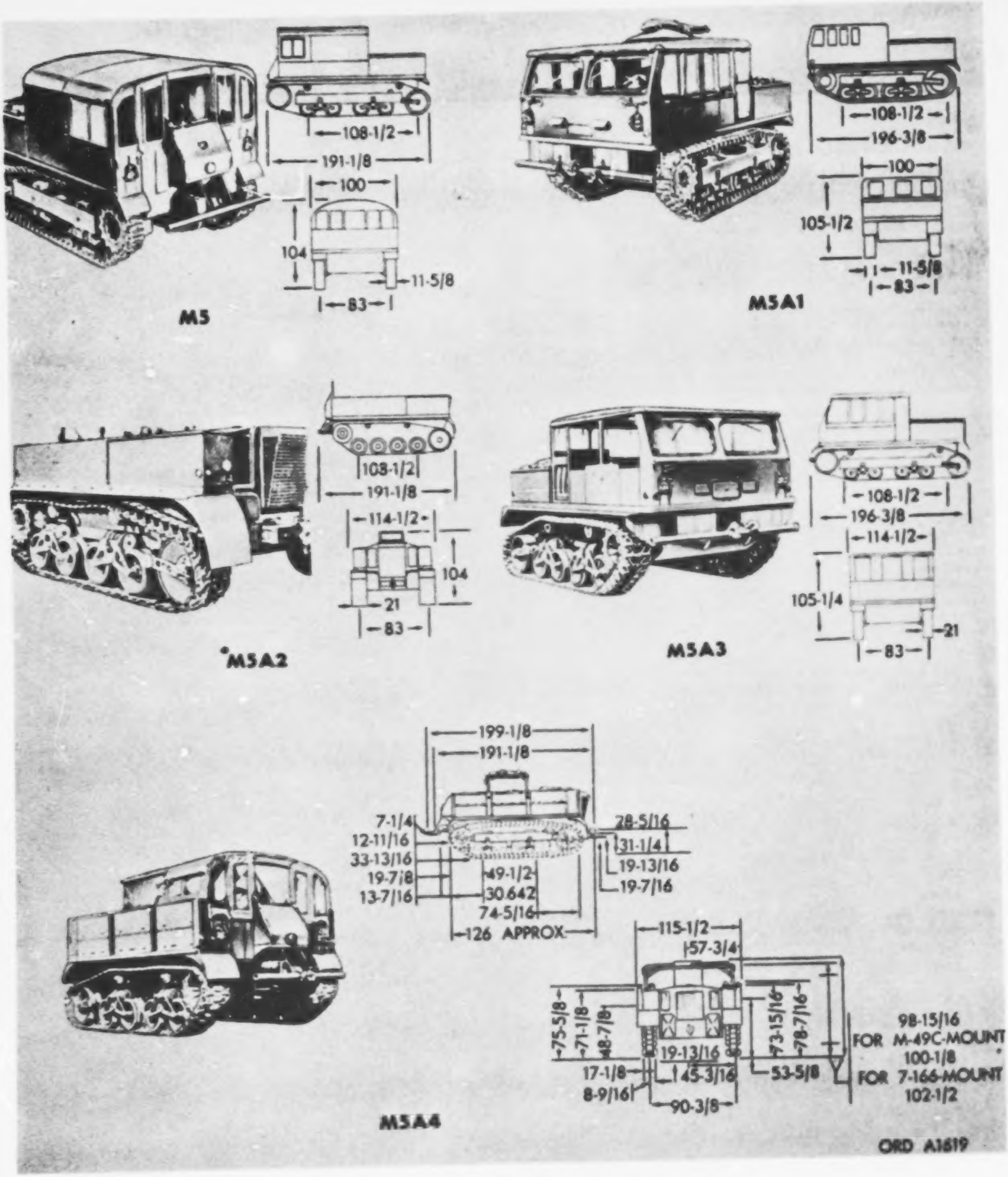
(Class 2430)

(Includes Track Laying Tractors)

Page

TRACTOR, FULL TRACKED, HIGH SPEED: 13-ton, M5, M5A1, M5A2, M5A3, and M5A4 24-2
TRACTOR, FULL TRACKED, HIGH SPEED: 18-ton, M4, M4A1, M4A1C, M4A2, and M4C 24-5
TRACTOR, FULL TRACKED, HIGH SPEED: M8A1, and M8A2 24-7

TRACTOR, FULL TRACKED, HIGH SPEED: 13-TON, M5, M5A1, M5A2, M5A3, AND M5A4


108-1/2
191-1/8
100
104
11-5/8
83
M5
108-1/2
196-3/8
100
105-1/2
11-5/8
83
M5A1
108-1/2
191-1/8
114-1/2
104
21
83
M5A2
108-1/2
196-3/8
114-1/2
105-1/4
21
83
M5A3
199-1/8
191-1/8
7-1/4
12-11/16
33-13/16
19-7/8
13-7/16
49-1/2
30.642
74-5/16
126 APPROX.
28-5/16
31-1/4
19-13/16
19-7/16
115-1/2
57-3/4
75-5/8
71-1/8
48-7/8
19-13/16
73-15/16
78-7/16
17-1/8
8-9/16
45-3/16
53-5/8
90-3/8
98-15/16
FOR M-49C-MOUNT
100-1/8
FOR 7-166-MOUNT
102-1/2
M5A4

ORD A1619

Major item

Model	*Line item No.*	*Federal stock No.*
M5	4-56870-10	2430-835-8140
M5A1	4-56870-20	2430-835-8573
M5A2	4-56870-	2430-835-8555
M5A3	4-56870-40	2430-835-8562
M5A4	4-56870-50	2430-867-5653

General

TRACTOR, FULL TRACKED, HIGH SPEED: 13-ton, M5, M5A1, M5A2, M5A3, and M5A4 is medium weight, heavy-duty, full track, general utility tractor designed to tow heavy artillery over rough terrain while transporting the gun, crew and ammunition. The vehicles are powered by six-cylinder, in-line, 4-cycle, liquid-cooled, valve-in-head, dual carburetor engines. The vehicles are equipped with a heavy-duty, dual-range type clutch. Power is transmitted to the final drives through helical-gear, constant-mesh transmission. The vehicles are equipped with electric and airbrake systems for use with trailers.

The vehicles are equipped with volute spring suspensions. The vehicles M5 and M5A1 are provided with track rubber T16 and T44 or track steel T30E6 and T55E1. The vehicles M5A2 and M5A3 are provided with track steel T82.

The vehicle frames consist of two longitudinal heavy-section steel channels rigidly braced and attached to two transverse crossmembers which extend on each side. Removable plates are installed under the body to provide access to many vehicle components. Armament for the vehicles is a MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible* in mount cal. .50 AA.

Differences among models

M5:

This tractor is identified by the unarmored, open top body, which may be inclosed by a canvas top and side curtains. The vehicle is equipped with a front mount winch assembly, to which a tubular steel bumper is attached. Two small doors are located in the front of the body, on either side of the center mounted driver's compartment. The vehicle is supported by four road wheels on each side and runs on a narrow front driven track.

M5A1:

This tractor is a later version of the M5 and is identified by the wide covered cab, side doors, and double windshield. The front mounted winch assembly is recessed under the cab floor and the bumper is equipped with a pintle hook and two tow hooks. A ring mount for a caliber .50 machinegun is mounted in the cab top.

M5A2:

This tractor differs from the M5 only in the track and suspension. It has a horizontal volute spring suspension.

M5A3:

This tractor is a modified version of the M5A1 and is identified by the suspension system and wide tracks. The suspension system is modified to provide for a wider track by the addition of spacers between the tractor hull and the suspension brackets.

M5A4:

This tractor is equipped with a mechanically operated clutch and has only one air reservoir. The clutch gear reduction unit is replaced by a two-speed auxiliary transmission.

The vehicle tracks are equipped with welded extenders to improve flotation and increase traction. The width of the vehicle is widened 14 inches to provide seating capacity for additional crew members.

Data plate location

The data plate is located on the instrument panel in the driver's compartment.

Classification	
M5	Standard B (OTCM 36841)
M5A1	Standard B (OTCM 36841)
M5A2	Standard B (OTCM 36841)
M5A3	Standard B (OTCM 36841)
M5A4	Standard B (OTCM 36841)

CHARACTERISTICS

Crew:
M5 and M5A2 9
M5A1 and M5A3 11
M5A4 12

Length, overall: .... 191½ in.
M5 and M5A2 .... 190¾ in.
M5A1 and M5A3 .... 199½ in.
M5A4
Center of front pivot shaft to center of rear pivot shaft:
M5A4 .... 49½ in.
Center of front pivot shaft to center of drive sprocket:
M5A4 .... 30.042 in.
Center of rear pivot shaft to center of rear road wheel:
M5A4 .... 74 5/16 in.
Center of drive sprocket to towing pintle:
M5A4 .... 126 in.
Front of vehicle to center of drive sprocket:
M5A4 .... 33 11/16 in.
Front of winch to center of drive sprocket:
M5A4 .... 19⅞ in.
Wheel base .... 108½ in.
Width, overall: .... 100 in.
M5 and M5A1 .... 114½ in.
M5A2 and M5A3 .... 115½ in.
M5A4
Height, overall: .... 104 in.
M5 and M5A2 .... 105½ in.
M5A1 .... 105¼ in.
M5A3 .... 102½ in.
M5A4
Height to T166 Mount:
M5A4 .... 100½ in.
Height to M49C Mount:
M5A4 .... 98 15/16 in.
Height to top of ammunition boxes:
M5A4 .... 73 11/16 in.
.... 78 7/16 in.
.... 53⅝ in.

Fender height: .... 48⅞ in.
M5A4 .... 71½ in.
.... 75¾ in.

Armament:
Ring mount for gun, machine cal. .50, Browning, M2, heavy barrel (flexible) 1
MACHINEGUN, CALIBER .50: Browning, M2, heavy barrel, flexible 1
Tracks:
Width:
M5 and M5A1 .... 11⅝ in.
M5A2 and M5A3 .... 21 in.
M5A4 .... 17½ in.
Center to inner edge .... 8 9/16 in.
Tread (center to center of track) .... 83 in.
M5, M5A1, M5A2 and M5A3 .... 90⅝ in.
M5A4
Outside to outside of tracks: .... 100 in.
M5 and M5A1 .... 104 in.
M5A2 and M5A3 .... 108½ in.
M5A4
Angle of approach ....
Angle of departure ....
Type of fuel .... gasoline
Center of gravity above ground ....
Weight:
Crew and equipment: .... 28,572 lb
M5 .... 30,405 lb
M5A1 .... 26,149 lb
M5A2 .... 30,360 lb
M5A3 .... 29,804 lb
M5A4
Empty:
M5 ....
M5A1 ....
M5A2 ....
M5A3 ....
M5A4 ....
Length of track on ground ....
Ground contact area —0-inch penetration ....

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* For characteristics and data, see item in section 2.

CHARACTERISTICS—Continued

Ground clearance	19⅜ in.
Ground pressure:	
M5	11.3 psi
M5A1	12.1 psi
M5A2	5.7 psi
M5A3	6.7 psi
M5A4	11.1 psi
Pintle height, loaded:	
M5	28⁹⁄₁₆ in.
M5A1, M5A2, and M5A3	28½ in.
M5A4	
Electrical system:	12 volt
Number of batteries	1
Type of ground	negative
Fuel octane rating:	
M5, M5A2, and M5A3	70–80
M5A1	70
M5A4	72
Capacities:	
Fuel	100 gal
Cooling system	80 qt
Crankcase, refill	22 qt
Winch:	
Oil capacity	1½ pt
Load capacity	15,000 lb
Clutch reduction gear:	
M5, M5A1, M5A2, and M5A3	3½ pt
Clutch selector unit:	
M5, M5A1, M5A2, and M5A3	3 pt
Transmission and differential	48 qt
Final drive	3 qt
Auxiliary transmission:	
M5A4	6 qt
Brakes	mechanical, controlled-differential
Parking brake, type	buttons for locking steering levers
Clutch reduction unit (M5, M5A1, M5A2 and M5A3):	
Speeds	2
Gear ratio	High 1.1:1; Low 1.71:1
Transmission:	
Manufacturer	
Model	
Type	
No. of ranges:	
Forward	4
Reverse	
Gear ratio:	
M5, M5A1, M5A2, and M5A3	High 1:1; Low 5.43:1
M5A4	Low 76.317:1; High 6.117:1
Differential-drive gear ratio	2.6:1
Final drive gear ratio	2.353:1
Auxiliary transmission:	
Direct	1.000:1
Low	2.298:1
Engine:	
Manufacturer	Continental
Model	R6572
Type	4-cycle, valve-in-head, in-line
No. of cylinders	6
Displacement	572 cu in.
Bore	4⅝ in.
Stroke	5⅝ in.
Compression ratio	6.5:1
Governed speed	2,900 rpm
Brake horsepower (max w/std accessories)	207 @ 2,900 rpm
Torque (max w/std accessories)	455 ft-lb @ 1,000 rpm
Type of ignition	distributor

AMMUNITION

105-mm	56 rds
or 155-mm (with extra primers and fuses)	24 rds
Cal. .50	525 rds

PERFORMANCE

Maximum grade ability:	
M5, M5A1, M5A2, and M53A	50 percent
M5A4	70 percent
Turning radius	20 ft
Fording depth	53 in.
Maximum width of ditch vehicle can cross	66 in.
Maximum vertical obstacle vehicle can climb	18 in.
Fuel consumption (average conditions)	1½ mpg
Cruising range (average conditions)	150 mi
Allowable speed, recommended	30 mph
Maximum allowable towed load, gross:	
M5, M5A1, M5A2, and M5A3	20,000 lb
M5A4	29,800 lb

EQUIPMENT

Communications:
Sight and Fire Control:
Basic Issue Item: See ORD 7 SNL 6–162.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume:	
M5	1,150 cu ft
M5A1	1,200 cu ft
M5A2	1,315 cu ft
M5A3	1,375 cu ft
M5A4	1,332 cu ft
Area:	
M5	133 sq ft
M5A1	137 sq ft
M5A2	152 sq ft
M5A3	157 sq ft
M5A4	159 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume:	
M5	
M5A1	
M5A2	
M5A3	
M5A4	
Area:	
M5	
M5A1	
M5A2	
M5A3	
M5A4	
Gross weight	
Ship tons	

References: SNL G–162, TM 9–786

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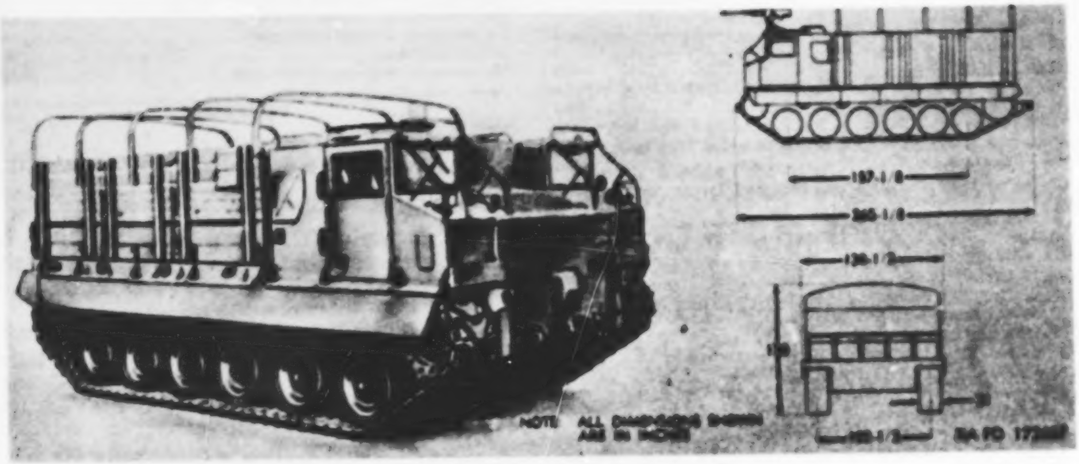
TRACTOR, FULL TRACKED, HIGH SPEED: M8A1 AND M8A2



Major item

Model	*Line item No.*	*Federal stock No.*
M8A1, w/e	4-56885-10	2430-740-5800
M8A2, w/e	4-56885-15	2430-503-7250

General

TRACTOR, FULL TRACKED, HIGH SPEED: M8A1 and M8A2 are late procurement type general utility tractors designed to transport general cargo over rough terrain. The vehicles are powered by forward mounted air-cooled, 4-cycle, valve-in-head engines. Power is transmitted to the final drives through cross-drive transmissions, which are combined transmissions differential and steering units. The vehicles are also used to transport the 75-mm AA "Sky Sweeper" ammunition and related equipment while towing the gun assembly and related equipment. When used in this capacity, the tractors are equipped with a front mounted bulldozer blade, special body kit and a rear mounted hoist.

The vehicles are equipped with torsion bar suspension incorporating six double disc road wheels on each side.

The vehicles are equipped with track, rubber-backed, steel, T91E3 w/detachable rubber grousers.

The hulls of the vehicles are completely welded structures except for portion such as oil drain access covers, hull front door, and winch access door. All doors and covers can be removed for service and maintenance operations.

Differences among models

There are no outward visual differences between the two models. The differences being that the engine assembly of the M8A2 is equipped with a fuel injection system.

Data plate location

The data plate is located on the right inner wall of the driver's compartment.

Classification

M8A1—Standard B (OTCM 36841)
M8A2—Standard A (OTCM 36841)

CHARACTERISTICS

Crew	9
Length, overall	265⅛ in.
Wheel base	157⅛ in.
Width, overall	130½ in.
Height, overall	120 in.
Height (ground to Hull floor)	18⅝ in.

Body inside dimensions:	
Length	157 in.
Width	114½ in.
Height	62½ in.
Cargo space	650 cu ft
Armament:	
Ring mount M66 at top of cab	1
Tracks:	
Width	21 in.
Tread (center to center of track)	102½ in.
Outside to outside of track	123½ in.
Angle of approach	
Angle of departure	
Type of fuel	
Center of gravity above ground	
Weight of vehicle:	
Net	37,500 lb
Payload	17,500 lb
Gross	55,000 lb
Length of track on ground	
Ground contact area —0-inch penetration	
Ground clearance	10⅝ in.
Ground pressure	8.3 psi
Pintle height, loaded	30 in.
Loading height	57⅝ in.
Electrical system	24 volts
No. of batteries	2 (12 volt)
Type of ground	negative
Capacities:	
Fuel	225 gal
Crankcase, refill	44 qt
Transmission, cross-drive (including cooler)	72 qt
Power-take-off	1 qt
Winch:	
Oil	320 qt
Transmission	6 qt
Load	45,000 lb
Final drive (each)	4 qt
Fuel octane rating	80

Brakes:

Hand lever controlled, hydraulic, multiple-disk steering brakes. Pedal operater them as service brakes.

Parking brake, type	lever for locking service brakes
Hull construction	welded sheet steel

CHARACTERISTICS—Continued

Transmission:	
Manufacturer	General Motors Corp. (Allison Div)
Model	CD 500-3
Type	cross-drive
No. of ranges:	
Forward	2
Reverse	1
Final drive gear ratio	4.69:1
Ratio from engine output to torque converter input	0.715:1
Torque-converter stall ratio	3.8:1
Drive ranges	low, high, and reverse
Ratio from torque converter output shaft to final drive flange:	
High range	1.4:1
Low range	5.34:1
Engine:	
Manufacturer	Continental
Model:	
M8A1	AOS-895-3
M8A2	AOS-895-5
Type	Valve-in-head, 4-cycle, air-cooled
No. of cylinders	6
Displacement	895 cu in.
Bore	5¾ in.
Stroke	5¾ in.
Compression ratio	5.5:1
Governed speed (full load)	2,800 rpm
Brake horsepower (max w/std accessories)	863 at 2,800 rpm
Torque (max w/std accessories)	760 ft-lb at 2,060 rpm
Type of ignition	magneto

AMMUNITION

Cal. .50	525 rounds
Cal. .30 (Carbine)	360 rounds
Rockets	10

PERFORMANCE

Maximum grade ability	60 percent
Turning radius	pivots in place
Fording depth	42 in.
Maximum width of ditch vehicle can cross:	
Forward	84 in.
Reverse	80 in.
Maximum vertical obstacle vehicle can climb	30 in.
Fuel consumption (average conditions)	0.8 mpg
Cruising range (average conditions)	180 mi
Maximum speed	40 mph
Maximum allowable towed load, gross	39,000 lb.

EQUIPMENT

Sighting and Fire Control
Communications
Basic Issue Items: See TM 9-7420.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	2420 cu ft
Area	242 sq ft
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Area	
Gross weight	
Ship tons	

References: SNL G-252, TM 9-7420, TM 9-2430-200-20P

SECTION 25

MISCELLANEOUS VEHICULAR COMPONENTS

(Class 2590)

(Includes Bulldozers)

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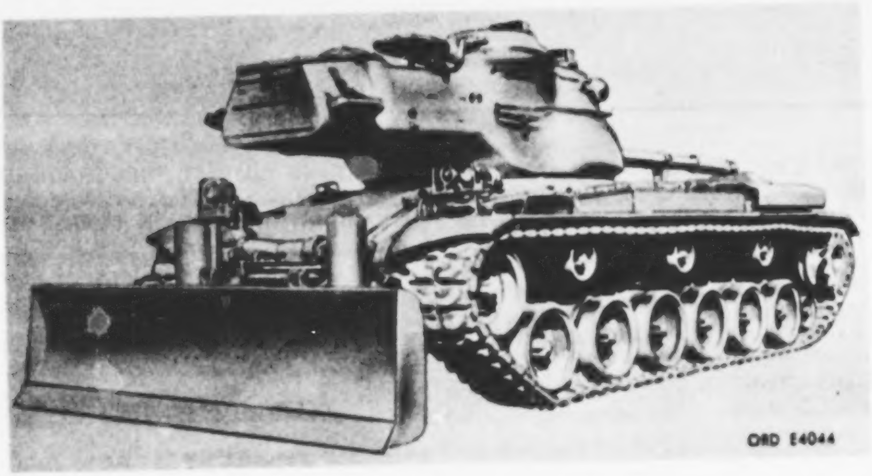
BULLDOZER, EARTH MOVING: tank mounting, M8 and M8A1 (MBE1) (MOUNTED ON TANK, COMBAT, FULL TRACKED: 90-mm gun, M48) 25-3
BULLDOZER, EARTH MOVING: tank mounting, M9 (MOUNTED ON TANK, COMBAT, FULL TRACKED: 105-mm gun, M60) .... 25-5 (no illus.)
BULLDOZER, EARTH MOVING: tractor mounting, M5 (T8E4) (MOUNTED ON TRACTOR, FULL TRACKED, HIGH SPEED: M8A2) 25-6
BULLDOZER EARTH MOVING COMBAT ENGINEER VEHICLE M7 (MOUNTED ON COMBAT ENGINEER VEHICLE: M102) .... 25-7 (no illus.)

BULLDOZER, EARTH MOVING: TANK MOUNTING, M6 (MOUNTED ON TANK, COMBAT, FULL TRACKED: 90-MM GUN, M47)



Major item

Model	*Line item No.*	*Federal stock No.*
M6, w/e	4-01718-40	2590-318-9162

General

BULLDOZER, EARTH MOVING: tank mounting, M6, is mounted on TANK COMBAT, FULL TRACKED: 90-mm gun, M47. The bulldozer when propelled by the vehicle is used to clear land, move wreckage, move earth and debris. The controls for operation of the bulldozer are located conveniently with respect to the vehicle driver. The bulldozer consists of a moldboard, two push beams, four tilt arms, two carrying hooks, two double-acting hydraulic cylinders, and mounting brackets. Guards are provided to protect all vulnerable lines and parts located on the vehicle hull.

The moldboard is provided with a reversible (blade) cutting edge and is supported by a quadrilateral linkage. This linkage consists of, the two push beams connected near the bottom of the moldboard, and the two inner and outer tilt arms connected at the top of the moldboard. The two double-acting hydraulic cylinders are provided to raise and lower the moldboard.

A hydraulic pump located below the turret floor and driver by the vehicle engine provides pressure for actuating the cylinders. The hydraulic reservoir for the system is located to the right of the bow gunner's seat.

Differences among models

Data plate location

The data plate is located on the center of the rear side of the moldboard.

Classification: Standard C (OTCM 37209).

CHARACTERISTICS

Weight (net increase to vehicle, including oil)	6,000 lb
Moldboard length	146 in.
Moldboard height	36⅝ in.
Reversible moldboard (blade) cutting edge	⅝ x 8 x 146 in.
Angle of moldboard (blade) cutting edge (with horizontal):	
At ground level	58°
At float position	
At lowest position	
Relation of moldboard (blade) cutting edge to ground:	
Carrying position, above	31 in.
Highest position, above	32 in.
Lowest position, below	9⅝ in.
Vehicle angle of approach:	
Blade in carrying position	20°
Blade in highest position	22°
Hydraulic system (oil):	
Pump rating	
Relief pressure setting	
Control valve:	
4-position	raise-hold-lower-float
Recommended oil:	

PERFORMANCE

Rate of lift:	
Vehicle engine of 1,500 rpm	4.0 in. per sec
Vehicle engine at 2,800 rpm	7.5 in. per sec
Forward speed of vehicle while bulldozing (low gear)	1 to 3 mph
Recommended maximum speed of vehicle with bulldozer attached	15 mph

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-286.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

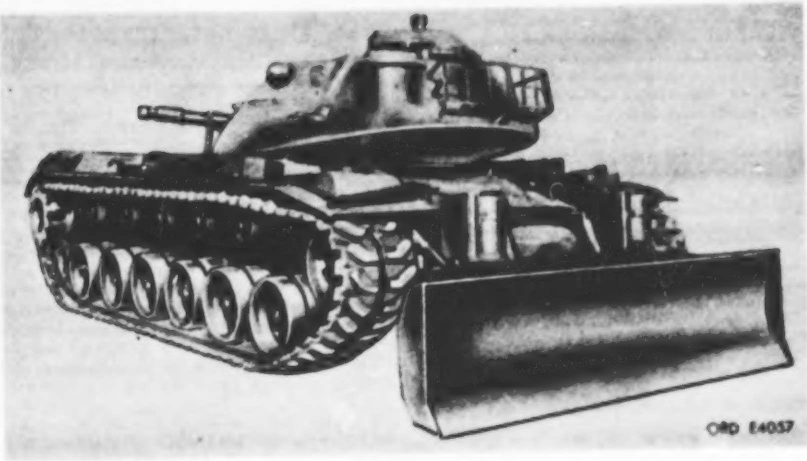
Shipped 1	
Length	146 in.
Width	60 in.
Height	36⅝ in.
Volume	187 cu ft
Gross weight	6,000 lb
Ship tons	4.67

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL G-286, TM 9-7426.

BULLDOZER, EARTH MOVING: TANK MOUNTING, M8 AND M8A1 (M8E1) (MOUNTED ON TANK, COMBAT, FULL TRACKED: 90-MM GUN, M48)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Major item

Model	*Line item No.*	*Federal stock No.*
M8, w/e	4-01718-55	2590-838-1800
M8A1(M8E1), w/e	4-01718-	2590-649-5937

General

BULLDOZER, EARTH MOVING: tank mounting, M8, mounted on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48, M48A1, and M48C; and BULLDOZER, EARTH MOVING: tank mounting, M8A1 (M8E1), mounted on TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A2, when propelled by their respective vehicles are used for road grading, clearing land, moving debris, and digging emplacement. The controls for operation of the bulldozers are located conveniently with respect to the driver. Each bulldozer consists of a moldboard, two push beams, four tilt arms, two carrying hooks, two double-acting hydraulic cylinders, and mounting brackets. Guards are provided to protect all vulnerable lines and parts located on the vehicle hull.

The moldboard for each bulldozer is provided with a reversible (blade) cutting edge and is supported by a quadrilateral linkage. This linkage consists of the two push beams connected near the bottom of the moldboard and the two inner and outer tilt arms connected at the top of the moldboard. The two double-acting hydraulic cylinders are provided to raise and lower the moldboard.

The necessary pressure for actuating the cylinders is provided by a hydraulic pump driven by the vehicle engine. Oil for the system is stored in a hydraulic reservoir. The reservoir for the bulldozer M8 is mounted on the hull wall at the rear of the tank, and on the right fender for the bulldozer M8A1.

Differences among models

The bulldozer M8 control valves and hydraulic reservoir are mounted on the hull wall of the rear of the tank. The bulldozer M8A1 control valves and hydraulic reservoir are mounted on the right fender of the tank.

Data plate location

The data plate is located on the center of the rear side of the moldboard.

Classification

M8	Standard A (OTCM 36841)
M8A1	Standard A (OTCM 37174)

CHARACTERISTICS

Weight:	
M8	8,778 lb
M8A1	8,400 lb
Moldboard length	146 in.
Moldboard height:	
M8	$36\frac{5}{8}$ in.
M8A1	36 in.
Reversible moldboard (blade) cutting edge	146 x 8 x $\frac{5}{8}$ in.
Angle of moldboard (blade) cutting edge (with horizontal):	
At ground level	58°
At float position	
At lowest position	
Relation of moldboard (blade) cutting edge to ground:	
Carrying position, above:	
M8	31 in.
M8A1	27 in.
Lowest position, below	10 in.
Highest position, above:	
M8	30 in.
M8A1	
Vehicle angle of approach:	
Blade in carrying position	20°
Blade in highest position	20°
Hydraulic system (oil):	
Pump rating	65 gpm at 2,800 rpm at 1,000 psi
Relief pressure setting:	
M8	1,000 psi
M8A1	
Control valve:	
4-position	raise-hold-lower-float

Recommended oil: Seasonal transmission oil SAE 10 above −10° F. OES from 0° to 65° F.

PERFORMANCE

Rate of lift:	
Vehicle engine at 1,500 rpm	5.5 in. per sec
Vehicle engine at 2,800 rpm	10.5 in. per sec
Forward speed of vehicle while bulldozing	1 to 3 mph
Recommended maximum speed of vehicle with bulldozer attached	15 mph

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-278.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length:	
M8	146 in.
M8A1	159 in.
Width:	
M8	87 in.
M8A1	78 in.
Height:	
M8	
M8A1	40 in.
Volume:	
M8	70 cu ft
M8A1	290 cu ft
Gross weight:	
M8	8,778 lb
M8A1	8,775 lb
Ship tons:	
M8	1.75
M8A1	7.25

Outside Continental United States

Shipped	
Length:	
M8	
M8A1	
Width:	
M8	
M8A1	
Height:	
M8	
M8A1	
Volume:	
M8	
M8A1	
Gross weight:	
M8	
M8A1	
Ship tons:	
M8	
M8A1	

References: SNL G–278, TM 9–8830–202/15.

BULLDOZER, EARTH MOVING: TANK MOUNTING, M9 (MOUNTED ON TANK, COMBAT, FULL TRACKED: 105-MM GUN, M60)

Major item

Model	*Line item No.*	*Federal stock No.*
M9, w/e	4-01718-60	2590-708-3563

General

BULLDOZER, EARTH MOVING: tank mounting, M9, is mounted on TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. The bulldozer, when propelled by the vehicle, is used to clear land, dig emplacements, move wreckage, logs, trees, or other debris, or do emergency construction as well as other tasks accomplished by bulldozers, under conditions requiring armor protection. The controls for operation of the bulldozer are located conveniently with respect to the driver. The bulldozer consists of a moldboard, two push beams, four tilt arms, and mounting brackets. Heavy wall steel tubing, extending along the lower portion of the hull, connects the front and rear hydraulic components.

The moldboard is provided with a reversible (blade) cutting edge and is supported by a quadrilateral linkage. This linkage consists of the two push beams connected near the bottom of the moldboard, and the two inner and outer tilt arms connected to the top of the moldboard. The two double acting hydraulic cylinders are provided to raise and lower the moldboard.

The necessary pressure for actuating the hydraulic cylinders is provided by a hydraulic pump driven from the transmission rear power takeoff. The hydraulic reservoir for the system is mounted on the left-rear fender of the tank.

Differences among models

Data plate location

Classification: Standard A (OTCM 37227)

CHARACTERISTICS

Weight	10,000 lb
Moldboard length	146 in
Moldboard height	36 in
Reversible moldboard (blade) cutting edge	146 x 8 x ⅝ in
Angle of moldboard (blade) cutting edge (with horizontal):	
At ground level	58°
At float position	
At lowest position	
Relation of moldboard (blade) cutting edge to ground:	
Carrying position, above	27 in
Highest position, above	
Lowest position, below	10 in.
Vehicle angle of approach:	
Blade in carrying position	
Blade in highest position	
Hydraulic system (oil):	
Pump rating	65 gpm at 2,800 rpm at 1,000 psi
Safety unloader relief valve setting	5,000 psi
Control valve:	
Recommended oil:	
OE-10 above −10° F.	
OE8 0° to −65° F.	

PERFORMANCE

Rate of lift:	
Vehicle engine at	
Vehicle engine at	
Forward speed of vehicle while bulldozing	1 to 3 mph
Recommended maximum speed of vehicle with bulldozer attached	15 mph

EQUIPMENT

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

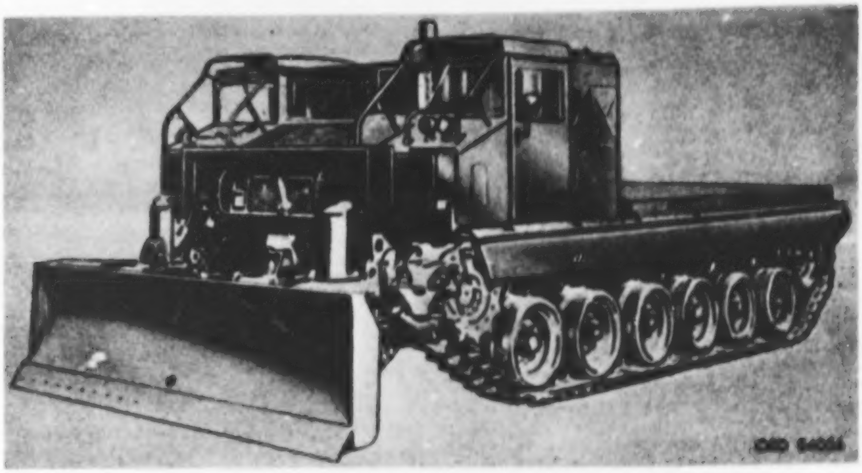
Outside Continental United States

Shipped

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:

BULLDOZER, EARTH MOVING: TRACTOR MOUNTING, M5 (T8E4) (MOUNTED ON TRACTOR, FULL TRACKED, HIGH SPEED: M8A2)



Major item

Model	***Line item No.***	***Federal stock No.***
M5(T8E4), w/e	4-01720-00	2590-709-6850

General

BULLDOZER, EARTH MOVING: tractor mounting, M5(T8E4), is mounted on TRACTOR, FULL TRACKED, HIGH SPEED: M8A2. The bulldozer, when propelled by the vehicle, is used to clear land, dig emplacements, and move earth. The controls for operation of the bulldozer are located conveniently with respect to the vehicle driver. The bulldozer consists of a moldboard, two push beams, four tilt arms, two hydraulically operated carrying hooks, two double-acting hydraulic cylinders, and mounting brackets. Guards are provided to protect all vulnerable lines and parts located on the outside of the vehicle.

The moldboard is provided with a reversible (blade) cutting edge and is supported by a quadrilateral linkage. This linkage consists of the two push beams connected near the bottom of the moldboard, and the two inner and outer tilt arms connected to the top of the moldboard. The two double-acting hydraulic cylinders are provided to raise and lower the moldboard.

A hydraulic pump, located in the vehicle hull and driven by the engine power takeoff provides pressure for actuating the two hydraulic cylinders and any other hydraulically operated units mounted on the vehicle. The vehicle hydraulic oil reservoir is equipped with a manifold for connecting the bulldozer hydraulic system into the vehicle hydraulic system.

Differences among models

Data plate location

The data plate is located on the center of the rear side of the moldboard.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Weight (net increase to vehicle (including oil))	4,000 lb
Moldboard length	129⅛ in.
Moldboard height	34⅞ in.
Reversible moldboard (blade) cutting edge	130 x 8 x ⅝ in.
Angle of moldboard (blade) cutting edge (with horizontal):	
At ground level	
At float position	60°
At lowest position	68°
Relation of moldboard (blade) cutting edge to ground:	
Carrying position, above	$30\frac{9}{16}$ in.
Highest position, above	$32\frac{9}{16}$ in.
Lowest position, below	7⅛ in.
Vehicle angle of approach:	
Blade in carrying position	20° 30 min
Blade in highest position	21° 30 min
Hydraulic system (oil):	
Pump rating	
Relief pressure setting	
Control valve:	
4-position	raise-hold-lower-flo
Recommended oil:	

PERFORMANCE

Rate of lift:	
Vehicle engine at 1,500 rpm	7.20 in. per sec
Vehicle engine at 2,400 rpm	14.14 in. per sec
Forward speed of vehicle while bulldozing (low gear)	1 to 3 mph
Recommended maximum speed of vehicle with bulldozer attached	15 mph

EQUIPMENT

Basic Issue Items: See ORD 7-8 SNL G-266.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	135 in.
Width	65 in.
Height	47 in.
Volume	239 cu ft
Gross weight	4,300 lb
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL G-266; TM 9-7406.

BULLDOZER EARTH MOVING COMBAT ENGINEER VEHICLE M7 (MOUNTED ON COMBAT ENGINEER VEHICLE M102)

Model	*Line item No.*	*Federal stock No.*
M7		

General

BULLDOZER EARTH MOVING COMBAT ENGINEER VEHICLE M7, mounted on combat engineer vehicle M102. The bulldozer, when propelled by the vehicle, is used to clear land, move wreckage, logs, trees, or other debris, or do emergency construction as well as other tasks accomplished by bulldozers, under conditions requiring armor protection. The controls for operation of the bulldozer are located conveniently with respect to the vehicle driver. The bulldozer consists of a moldboard, two push beams, four tilt arms, two carrying hooks, mounting brackets, and two double-acting hydraulic cylinders. The hydraulic cylinders are armored for protection against small arms fire, and waterproofed for limited surf operation.

The moldboard is provided with a reversible (blade) cutting edge and is supported by a quadrilateral linkage. This linkage consists of the two push beams connected near the bottom of the moldboard, and the two inner and outer tilt arms connected to the top of the moldboard. The two double-acting hydraulic cylinders are provided to raise and lower the moldboard.

The necessary pressure for operation of the hydraulic cylinders is provided by a hydraulic pump driven by the vehicle engine. The hydraulic oil for the system is stored in the vehicle reservoir.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841)

CHARACTERISTICS

Weight	6,000 lb
Moldboard length	140 in
Moldboard height	36⅝ in
Reversible moldboard (blade) cutting edge	140 x 8 x ⅝ in
Angle of moldboard (blade) cutting edge (with horizontal):	
At ground level	58°
At float position	
At lowest position	
Relation of moldboard (blade) cutting edge to ground:	
Carrying position, above	31 in
Highest position, above	32 in
Lowest position, below	9⅝ in
Vehicle angle of approach:	
Blade in carrying position	
Blade in highest position	
Hydraulic system (oil):	
Pump rating	
Relief pressure setting	
Control valve:	
4-position	raise-hold-lower-float

Recommended oil:

SAE 10 from 125° F. above to −0° F.

OES from 0° F. to −40° F.

PERFORMANCE

Rate of lift:	
Vehicle engine at	
Vehicle engine at	
Forward speed of vehicle while bulldozing	1 to 3 mph
Recommended maximum speed of vehicle with bulldozer attached	15 mph

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:

SECTION 26

TIME MEASURING INSTRUMENTS

(Class 6645)

(Includes pocket, stop, and wrist watches)

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WATCH, POCKET: grade I (railroad grade) 26-6
WATCH, POCKET: grade II 26-7
WATCH, WRIST: 26-8
WATCH, WRIST: grade III 26-10

STOP WATCH: TYPE A

Major item

Model	*Line item No.*	*Federal stock No.*
Waltham, 105 or American Inst. 5-405.	4-05328-20	6645-719-7941
Waltham, 11609	4-05328-10	6645-719-8670

General

STOP WATCH: type A has a second dial graduated from 0 to 60 seconds in ⅕-second intervals. The minute subdial has 1-minute graduations from 0 to 30 minutes. It is a stem-winding, open-faced watch with a sweep hand and a stop works mechanism. It is nonmagnetic.

Differences among models

Waltham 105 or American Inst. 5-405 has 7 jewels, while Waltham 11609 has 9 jewels.

Data plate location

Classification

105 or 5-405	Standard A
11609	Standard A

CHARACTERISTICS

Dial:	
Register	30 min
Background	white
Graduations	black
Numerals	black
Number of hands	2
Movement:	
Size	16
Jewels:	
105 or 5-405	7
11609	9
Winding	stem
Case:	
Face	open
Crystal	glass
Material	brass
Finish	chrome-plated
Running type	noncontinuous

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped	stop watches per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	stop watches per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:

STOP WATCH: TYPE A–8

Major item

Model	*Line item No.*	*Federal stock No.*
Type A–8	4–65230–00	6645–719–7135

General

STOP WATCH: type A–8 has a second dial graduated from 0 to 10 seconds in 1/10-second intervals. The minute subdial has 1-minute graduations from 0 to 5 minutes. It is a stem-winding, open-faced watch with a sweep hand and a stop works mechanism controlled by a stem push-button. It is used by the Corps of Engineers for navigation and ground speed purposes.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Dial:	5 min
Register	black
Background	white
Graduations	white
Numerals	2
Number of hands	
Movement:	16
Size	9
Jewels	stem
Winding	
Case:	open
Face	plastic
Crystal	
	nickel alloy
Material	chrome-plated
Finish	noncontinuous
Running type	

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

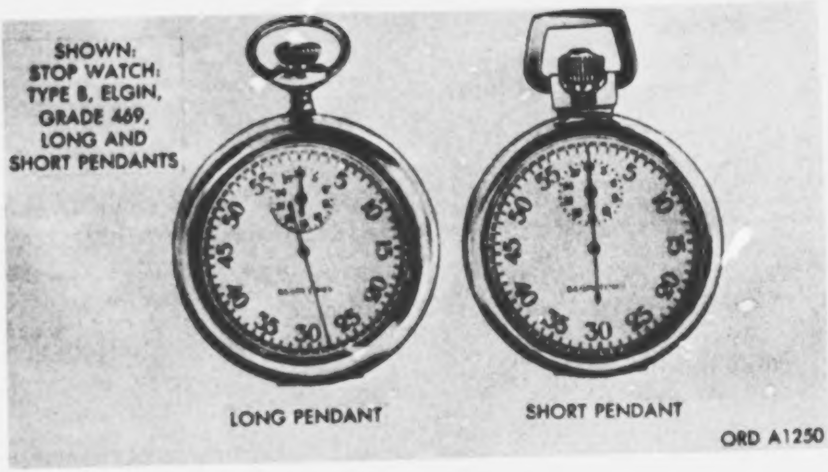
Shipped	stop watches per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped	stop watches per box
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References:

STOP WATCH: TYPE B



Major item

Model	*Line item No.*	*Federal stock No.*
Class 15, w/e	4-65330-01	6645-240-7162
Elgin, Grade 469, Long Pendant, w/e.	4-65330-10	6645-679-8216
Elgin, Grade 469, Short Pendant, w/e.	4-65330-12	6645-679-8217

General

STOP WATCH: type B may have either a long or short pendant. The second dial is graduated from 0 to 60 seconds in ¼-second intervals. The minute subdial has 1-minute graduations from 0 to 30 minutes. It is a stem-winding open-faced watch with a sweep hand and a stop works mechanism.

Differences among models

The class 15 model has 15 jewels while the other two models have 7 jewels. The class 15 model has a nickel or chromium alloy case while the other two have a brass case. The class 15 model has either a clear glass or permanently clear, nonbreakable crystal while the other two have glass crystals.

Data plate location

Classification: (Standard A) (OTCM 36841).

CHARACTERISTICS

Dial:	
Register	30 min
Background	white
Graduations	black
Numerals	black
Number of hands	2
Movement:	
Size	16
Jewels:	
Class 15	15
Long pendant	7
Short pendant	7
Winding	stem
Case:	
Face	open
Crystal:	
Class 15	clear glass or nonbreakable
Long pendant	glass
Short pendant	glass
Finish:	
Class 15	polished
Long pendant	chrome-plated
Short pendant	chrome-plated
Running type	continuous

PERFORMANCE

Running time	6 hrs

EQUIPMENT

Basic Issue Items: See TM 9-6645-200-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 24 stop watches per box.

Length	1 ft, 4 in.
Width	11 in.
Height	10 in.
Volume	1 cu ft
Gross weight	20 lb
Ship tons	0.03

Outside Continental United States

Shipped stop watches per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-36, TM 9-575; TM 9-1575; TM 9-6645-200-12P.

STOP WATCH: M1

Major item

Model	*Line item No.*	*Federal stock No.*
M1		6645-719-7134

General

STOP WATCH: M1 is an automatic timer, used by the Corps of Engineers for astronomic observation purposes.

Differences among models

Data plate location

Classification:

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped stop watches per box.
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped stop watches per box.
Length
Width
Height
Volume
Gross weight
Ship tons

Reference:

WATCH, POCKET: GRADE I (RAILROAD GRADE)

Major item

Model	*Line item No.*	*Federal stock No.*
Hamilton, Model 992B	4-65155-00	6645-679-8211

General

WATCH, POCKET: grade I (railroad grade) is an open-faced timepiece of standard American manufacture. This 21 jewel-precision timepiece has a white porcelain dial with Arabic numbers in black Hour, minute, and second hands are of blued steel. Five-minute graduations are marked by red numerals, and single minutes are indicated on the outer ring of the dial by small black numerals.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Dial:	
Hours	12
Background	white
Graduations	nonluminous
Numerals	nonluminous
Number of hands	3
Movement:	
Size	16
Jewels	21
Winding	stem
Case:	
Face	open
Crystal	plastic
Waterproof	non
Finish	chrome-plate
Magnetic	non

PERFORMANCE

Running time	30 hr

EQUIPMENT

Basic Issue Items: See TM 9-6645-200-12P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 24 watches per box.

Length	1 ft, 4 in.
Width	11 in.
Height	10 in.
Volume	1 cu ft
Gross weight	20 lb
Ship tons	0.03

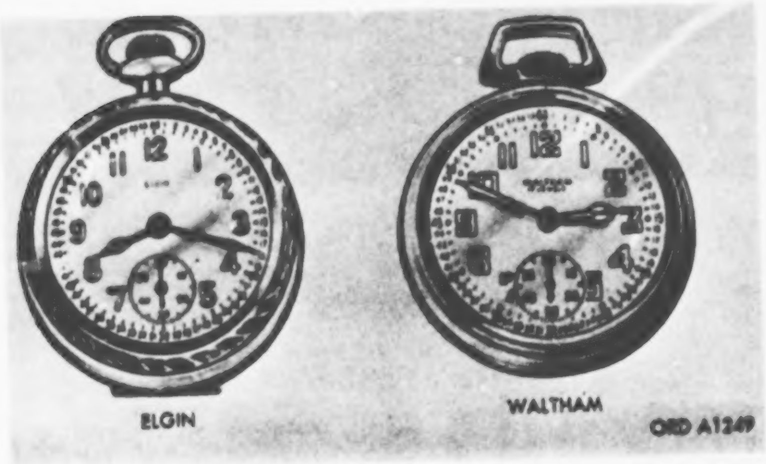
Outside Continental United States

Shipped per

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-187; TM 9-575; TM 9-1575; TM 9-6645-200-12P

WATCH, POCKET: GRADE II



Major item

Model	*Line item No.*	*Federal stock No.*
Elgin, Grade 387, w/e	4–65320–20	6645–679–8208
Waltham, Model 1908, w/e	4–65320–30	6645–679–8207

General

WATCH, POCKET: grade II, is an open-faced timepiece of standard American manufacture. The hour and minute hands and hour numerals are luminous coated. The minute and-second graduations are in black, with the small numerals indicating minute periods in red. The watch is stem-wound and stem-set.

Differences among models

The watches differ in the general design of the case. The Elgin model has a long pendant, the Waltham has a short pendant.

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Dial:	
Hours	12
Background	white
Graduation	nonluminous
Numerals	white and luminous
Number of hands	3
Movement:	
Size	16
Jewels	17
Winding	stem
Case:	
Face	open
Crystall	glass
Waterproof	non
Finish	nickel-plate

PERFORMANCE

Running time	30 hr

EQUIPMENT

Basic Issue Items: See TM 9–6645–200–12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 24 pocket watches per box.

Length	1 ft. 4 in.
Width	11 in.
Height	10 in.
Volume	1 cu ft
Gross weight	20 lb
Ship tons	0.03

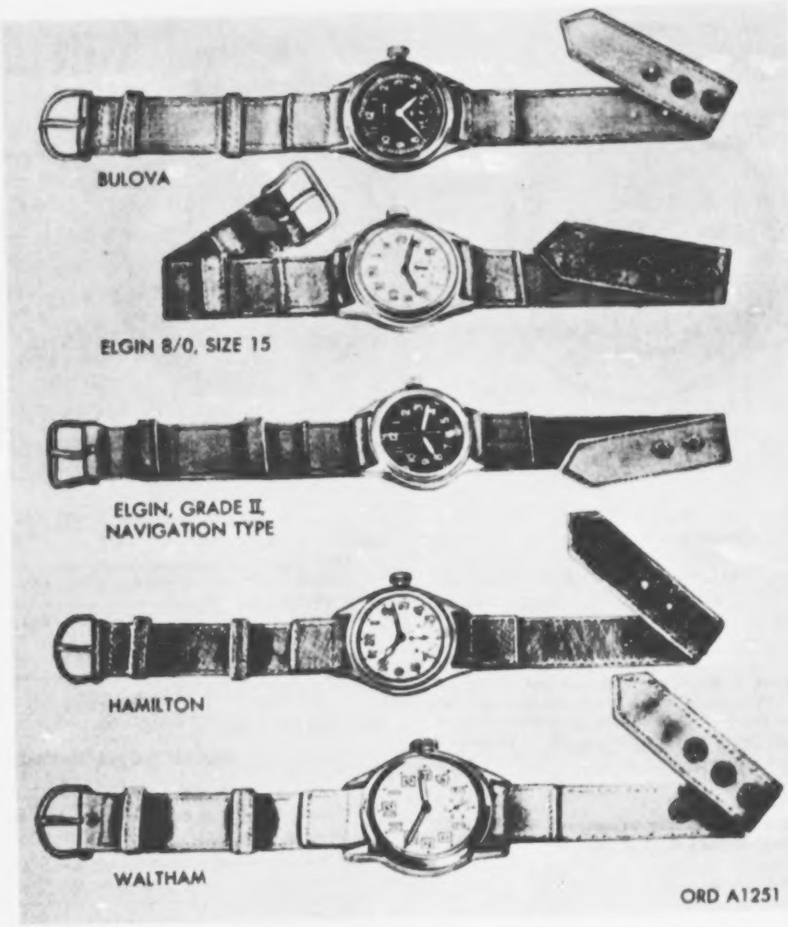
Outside Continental United States

Shipped pocket watches per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-36; TM 9–575; TM 9–1575; TM 9–6645–200–12P.

WATCH, WRIST



Model	*Major item* *Line item No.*	*Federal stock No.*
Bulova 15 jewel, Model 10AK....	4-65380-05	6645-719-9179
Elgin 8/0 size 15 jewel, grade 554	4-65380-15	6645-719-7069
Elgin, grade II, Type D, w/ second setting locking feature (Navigation Type).	4-65385-00	6645-719-8652
Hamilton 6/0 size 17 jewel, Model 987A.	4-65380-32	6645-719-8852
Waltham 6/0 size 17 jewel, Model 10617.	4-65380-36	6645-719-9181

General

WATCH, WRIST: is a small, open-faced timepiece equipped with an olive-drab webbing or russet leather wristband. It has hour, minute, and second hands. The watch is resistant to routine shock and incidental water immersion.

Differences among models

The Elgin, Grade II Navigation Type watch has a long, centrally located second hand and a second setting locking feature. All models are different in minor general detail proportions.

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Dial:	
Hours	12
Background:	
Bulova	black
Elgin:	
Grade II, Type D (Navigation Type)	black
8/0 size 15 jewel, grade 554	white
Hamilton	white
Waltham	white
Graduation	nonluminous
Hour numerals	luminous white
Hour and minute hands	luminous white
Number of hands	3
Movement:	
Size:	
Bulova	not specified
Elgin 8/0 size 15 jewel, grade 554	8/0
Elgin, Grade II, D, Navigation Type)	8/0
Hamilton	6/0
Waltham	6/0

CHARACTERISTICS—Continued

Jewels:	
Bulova	15
Elgin	15
Grade II, Type D (Navigation Type)	16
Hamilton	17
Waltham	17
Winding and setting	stem
Case:	
Face	open
Crystal	unbreakable plastic
Construction	watertight
Material	stainless steel
Finish	sand-blasted

PERFORMANCE

Running time	30 hr

EQUIPMENT

Basic Issue Items: See TM 9-6645-200-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 96 wrist watches per box

Length	1 ft. 4 in.
Width	11 in.
Height	10 in.
Volume	1 cu ft
Gross weight	20 lb
Ship tons	0.03

Outside Continental United States

Shipped wrist watches per box

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-36; TM 9-575; TM 9-1575; TM 6645-200-12P.

WATCH, WRIST: GRADE III

ELGIN
WALTHAM
ORD A1284

Major item

Model	*Line item No.*	*Federal stock No.*
Elgin 8/0 size 7 jewel, grade 580	4-65170-17	6645-719-8653
Waltham 6/0 size 9 jewel, Model 10609	4-65170-25	6645-719-9180

General

WATCH, WRIST: grade III is a small, open-faced timepiece having 7 or more jewels. It is equipped with an olive-drab webbing or russet leather wristband. The watch has hour, minute, and second hands. The hour and minute hands and the hour numerals are luminous coated. The watch is stem wound and stem set. It has an unbreakable crystal and is resistant to routine shock and incidental water immersion.

Differences among models

The Elgin model has a 7 jewel, 8/0 size movement. The Waltham model has a 9 jewel, 6/0 size movement.

Data plate location

The manufacturer's name is printed on the dial. The Ordnance serial number and grade are marked on the exterior back of the case.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Dial:	
Hours	12
Background	white
Graduation	nonluminous
Hour numerals	luminous white
Hour and minute hands	luminous white
Number of hands	3
Movement:	
Size:	
Elgin	8/0
Waltham	6/0
Jewels:	
Elgin	7
Waltham	9
Winding and stetting	stem
Case:	
Face	open
Crystal	unbreakable plastic
Construction	watertight
Material	stainless steel
Finish	sand-blasted

PERFORMANCE

Running time	30 hr

EQUIPMENT

Basic Issue Items: See TM 9-6645-200-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 96 wrist watches per box.

Length	1 ft, 4 in.
Width	11 in.
Height	10 in.
Volume	1 cu ft
Gross weight	20 lb
Ship tons	0.03

Outside Continental United States

Shipped wrist watches per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-36; TM 9-575; TM 9-1575; TM 9-6645-200-12P.

SECTION 27

OPTICAL INSTRUMENTS

(Class 6650)

(Includes azimuth instrument; battery commander's and observation telescopes; binoculars; guided missile gunner's binocular and tripod; indicator mount; optical spotting instrument; and periscopes)

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ADAPTER, TELESCOPE: M14	27- 2
BINOCULAR: M3	27- 3
BINOCULAR: M7	27- 4
BINOCULAR: M13 and M13A1	27- 5
BINOCULAR: M15 and M15A1	27- 6
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MOUNT, INDICATOR, RD NO. 7694893	27-11
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TELESCOPE, BATTERY COMMANDER'S: M65	27-19
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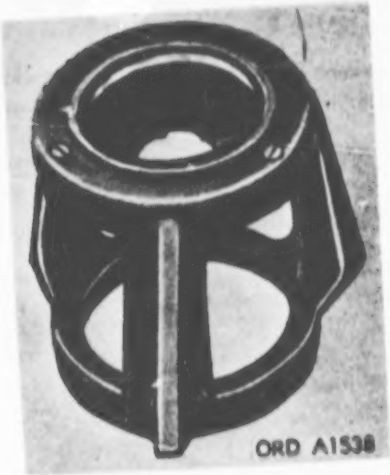
ADAPTER, TELESCOPE: M14



Secondary item

Model	*Line item No.*	*Federal stock No.*
M14		6650-658-2520

General

ADAPTER, TELESCOPE: M14, is used between the mount and tripod when TELESCOPE: battery commander's, M65* and MOUNT, TELESCOPE: M48** are employed with TRIPOD: M10.

Differences among models

Data plate location

Classification

CHARACTERISTICS

Maximum diameter	(approx) 4⅜ in.
Height	(approx) 4⅛ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-204-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped telescope adapters per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped telescope adapters per
Length
Width
Height
Volume
Gross Weight
Ship tons

References: TM 9-6650-204-12P.

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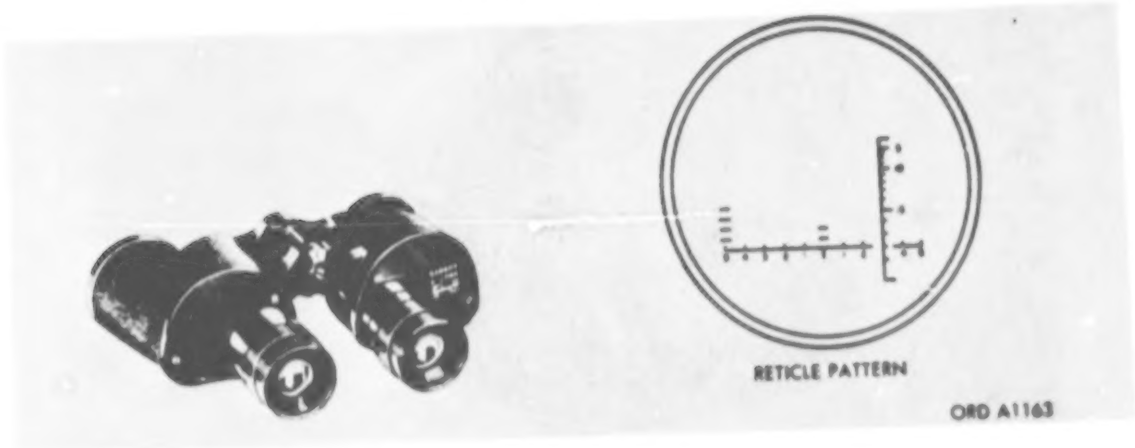
* For characteristics and data, see item on page 27-19.
** Characteristics and data will be added at a later date.

BINOCULAR: M3



RETICLE PATTERN

ORD A1163

Secondary item

Model	Line item No.	Federal stock No.
M3, w/e	4-01248-10	6650-670-2491

General

BINOCULAR M3 is a substitute for BINOCULAR M13A1.*
The binocular M3 contains a reticle in the left eyepiece, for approx-
imate measurement of small angles. The horizontal scale is gradu-
ated 10-mil interval from 0 to 50 on both sides of the center of the
field of view and marked 1, 2, 3, 4, 5. Above the horizontal scale
are two series of graduations, each graduation being spaced 5 mils
apart. The vertical scale (range) is graduated in hundreds of yards
from 0 to 2,000. When the center vertical line of the mil scale on
the reticle is alined with the target, deflection to the right or left
of the target can be read on the mil scale. Binocular M3 is used
for range estimation, determination of auxiliary aiming points, and
for general observation purposes.

Differences among models

Data plate location

Data plate is located on the left cover plate.

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Magnification	6 power
Aperture	30-mm
Field of view	8 deg, 30 min
Exit pupil	0.197 in.
"F" number of objective	F/4.4
Reticle horizontal scale	50-0-50 mils
Reticle range scale	0 to 2,000 yd
Filter	M1

*For characteristics and data, see item on page 27-5.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-202-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 24 binoculars (w/equipment) per shipping container

Length	2 ft, 10 in.
Width	2 ft, 2¼ in.
Height	11 in.
Volume	5.62 cu ft
Gross weight	140 lb
Ship tons	0.14

Outside Continental United States

Shipped 24 binoculars (w/equipment) per shipping container

Length	2 ft, 10 in.
Width	2 ft, 2¼ in.
Height	11 in.
Volume	5.62 cu ft
Gross weight	140 lb
Ship tons	0.14

References: TM 9-575, TM 9-1580, TM 9-6650-202-12P, TM 9-6650-208-35P.

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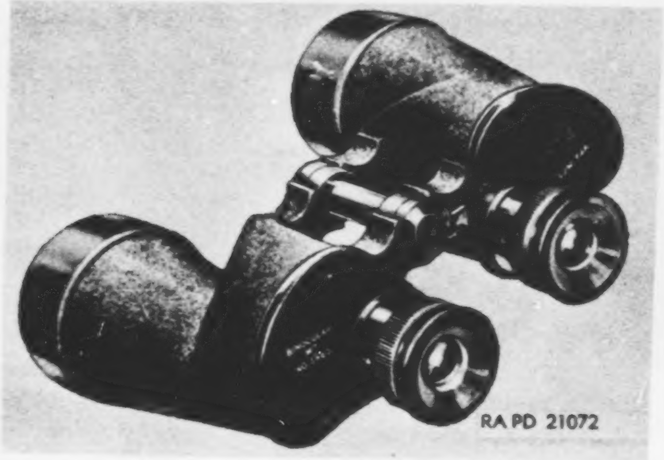
*For characteristics and data, see item on page 27-5.

BINOCULAR: M7



RA PD 21072

Secondary Item

Model	*Line item No.*	*Federal stock No.*
M7, w/e	4-01251-10	6650-670-2500

General

BINOCULAR: M7 is a seven power instrument and does not have a reticle. It consists of two prismatic telescopes pivoted about a common hinge so as to permit adjustment of the distance between the eyepieces (interpupillary distance). The hinge holds the axes of the two telescopes in parallel alinement. The prism system in each telescope erects the image and provides an offset line of sight which increases stereoscopic vision. The prism system also increases the effective optical length of the two telescopes without increasing their actual size. Each eyepiece can be focused independently of the other by turning the diopter scale in a plus or minus direction. The scale, which is calibrated in diopters, indicates the correction required for the corresponding eye. The binocular hinge is equipped with a scale which indicates in millimeters the interpupillary distance. It is waterproofed. It is a substitute for Binocular: M15 and M15A1.*

It is used solely for general observation purposes.

Differences among models

Data plate location

Data and identification is stamped on the left and right cover plates.

Classification: Standard B (OTCM 38641).

CHARACTERISTICS

Magnification	7 power
Aperture	50-mm
Field of view	7 deg, 16 min
Exit pupil	
"F" number of objective	
Filter	M1

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-203-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10⅛ in.
Width	1 ft, 8¼ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

Outside Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10⅛ in.
Width	1 ft, 8¼ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

References: TM 9-575, TM 9-1580, TM 9-6650-203-12P, TM 9-6650-208-35P.

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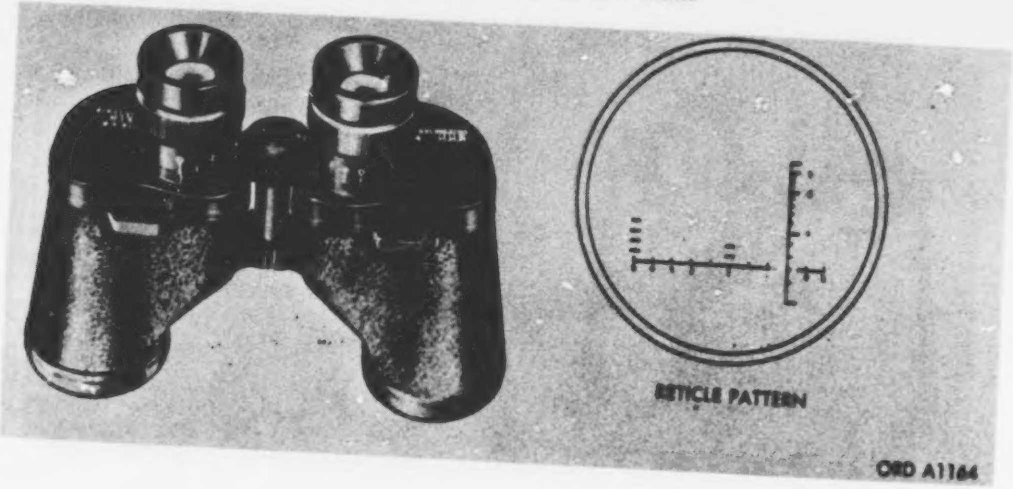
*For characteristics and data, see items on page 27-6.

BINOCULAR: M13 AND M13A1



ORD A1164

Secondary item

Model	*Line item No.*	*Federal stock No.*
M13, w/e	4-01248-40	6650-670-2508
M13A1, w/e	4-01248-50	6650-530-0978

General

BINOCULAR: M13 and M13A1, consists of two prismatic telescopes pivoted about a common hinge so as to permit adjustment of the distance between the eyepieces (interpupillary distance). The binocular hinge is equipped with a scale which indicates this distance in millimeters. The hinge holds the axes of the two telescopes in parallel alinement. The prism system in each telescope erects the image and provides an offset line of sight which increases stereoscopic vision. The prism system also increases the effective optical length of the two telescopes without increasing their actual size. Each eyepiece can be focused independently of the other by turning the diopter scale in a plus or minus direction, providing the correction required for the corresponding eye.

These binoculars are used for observation and have a reticle in the left eyepiece identical to that of BINOCULAR: M8,* for approximate measurement of small angles.

Differences among models

The M13 and M13A1 are identical with the exception that the waterproofing of the M13A1 has been improved over the waterproofing of the M13.

Data plate location

Model number, magnification, and diameter of the objectives are shown on the cover of the left eyepiece assembly.

Classification:

M13	Standard B (OTCM 36841)
M13A1	Standard B (OTCM 36841)

CHARACTERISTICS

Magnification	6 power
Aperture	30-mm
Field of view	
Exit pupil	8 deg, 30 min
"F" number of objective	0.197 in.
Reticle horizontal scale	F/4.4
Reticle range scale	50-0-50 mils
Filter	0 to 2,000 yd
	M1

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-208-12P.

INSTRUCTIONAL MATERIAL

For graphic training aids and devices, see DA Pam 310-5.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 24 binoculars (w/equipment) per shipping container

Length	
Width	2 ft, 10 in.
Height	2 ft, 2¼ in.
Volume	11 in.
Gross weight	5.62 cu ft
Ship tons	140 lb
	0.14

Outside Continental United States

Shipped 24 binoculars (w/equipment) per shipping container

Length	
Width	2 ft, 10 in.
Height	2 ft, 2¼ in.
Volume	11 in.
Gross weight	5.62 cu ft
Ship tons	140 lb
	0.14

References: TM 9-575, TM 9-1580, TM 9-6650-208-12P, TM 9-6650-208-35P.

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* For characteristics and data, see item on page 27-3.

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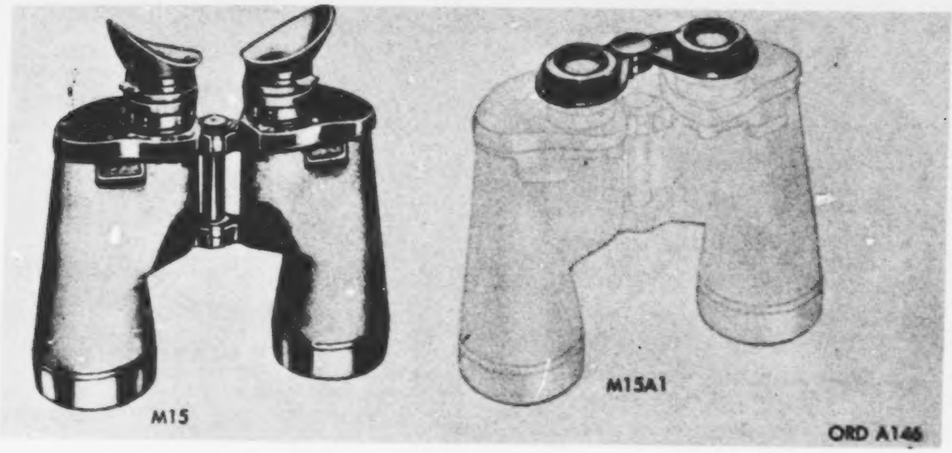
BINOCULAR: M15 AND M15A1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M15	4-01251-20	6650-670-2512
M15A1	4-01251-30	6650-530-0959

General

BINOCULAR: M15 and M15A1, consists of two prismatic telescopes pivoted about a common hinge so as to permit adjustment of the distance between the eyepieces (interpupillary distance). The hinge holds the axes of the two telescopes in parallel alinement. The prism system in each telescope erects the image and provides an offset line of sight which increases stereoscopic vision. The prism system also increases the effective optical length of the two telescopes without increasing their actual size. Each eyepiece can be focused independently of the other by turning the diopter scale in a plus or minus direction. The scale, which is calibrated in diopters, indicates the correction required for the corresponding eye. The binocular hinge is equipped with a scale which indicates in millimeters the interpupillary distance. These binoculars do not have a reticle. They are waterproofed and similar to BINOCULAR: M7.*

They are used solely for observation purposes.

Differences among models

These binoculars are identical with the exception of the filters. Binocular M15 has a soft rubber eyepiece and built-in polarized filter (to eliminate glare). In the binocular M15A1 this feature has been replaced with an eye guard to accommodate the M1 filter.

Data plate location

Model number, magnification, and diameter of the objectives are shown on the cover of the left eyepiece assembly.

Classification:

M15	Standard B (OTCM 36841)
M15A1	Standard A (OTCM 36841)

CHARACTERISTICS

Magnification	7 power
Aperture	50-mm
Field of view	7 deg, 16 min
Exit pupil	0.280 in.
"F" number of objective	F/3.8
Filter (for M15A1)	M1

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-209-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10⅛ in.
Width	1 ft, 8⅛ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

Outside Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10⅛ in.
Width	1 ft, 8⅛ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

References: TM 9-575, TM 9-1580, TM 9-6650-209-12P, TM 9-6650-208-35P.

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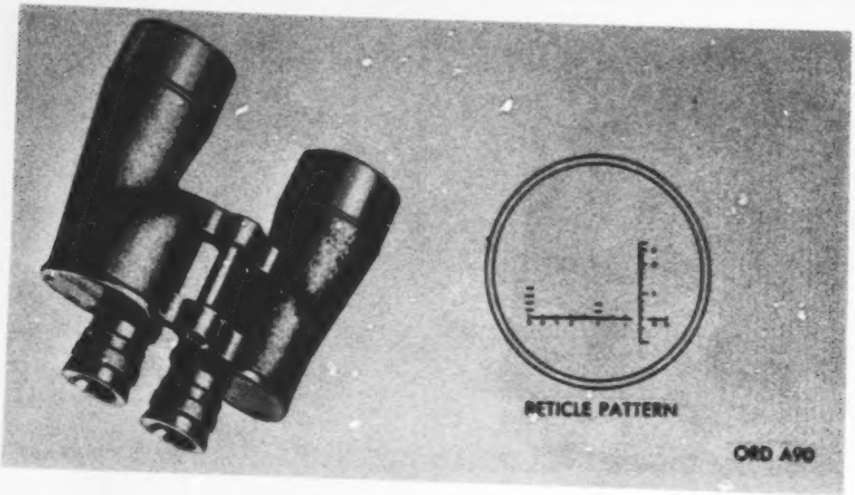
* For characteristics and data, see item on page 27-4.

BINOCULAR: M16



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Secondary item

Model	*Line item No.*	*Federal stock No.*
M16	4-01250-10	6650-670-2514

General

BINOCULAR: M16, is a seven-power instrument used for general observation purposes and for estimating small angles. The left eyepiece is equipped with a mil scale reticle identical to that on BINOCULAR: M3, M17, and M17A1.* This binocular is similar to the M7, M15, and M15A1* with the exception that it has a reticle in the left eyepiece.

Differences among models

Data plate location

Data plate is located on the left cover plate.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Magnification	7 power
Aperture	50-mm
Field of view	7 deg, 16 min
Exit pupil	0.280 in.
"F" number of objective	F/3.9
Reticle horizontal scale	50-0-50 mils
Reticle range scale	0 to 2,000 yd
Filter	M1

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-210-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10½ in.
Width	1 ft, 8⅜ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

Outside Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10½ in.
Width	1 ft, 8⅜ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

References: TM 9-1580, TM 9-6650-210-12P, TM 9-6650-208-35P.

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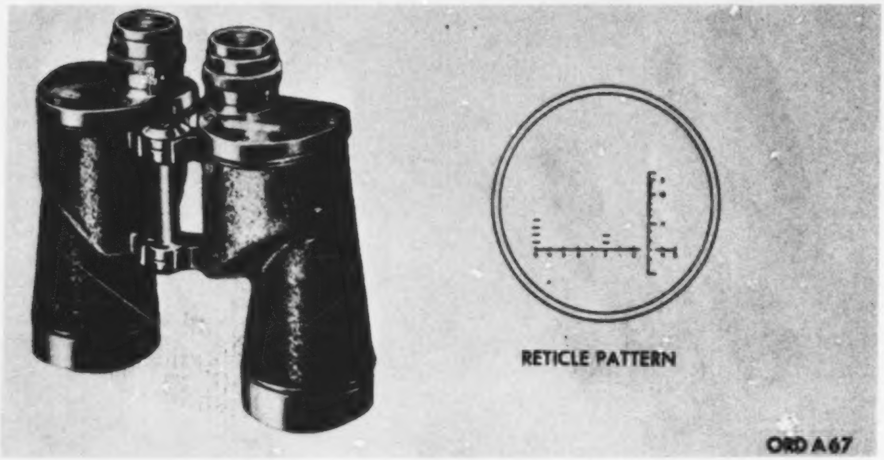
*For characteristics and data, see items on pages 27-3, 27-4, 27-6, and 27-8.

BINOCULAR: M17 AND M17A1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M17, w/e	4-01250-20	6650-670-2516
M17A1, w/e	4-01250-30	6650-530-0974

General

BINOCULAR: M17 and M17A1, is a seven-power instrument used for general observation purposes and for estimating small angles. The left eyepiece is equipped with a mil scale reticle which is identical to that on the binocular M3.* The binoculars M17 and M17A1 are similar to binoculars M7, M15, and M15A1* with the exception that the binoculars M17 and M17A1 have a reticle in the left eyepiece.

The binoculars M17 and M17A1 are used with various guns, including GUN, FIELD ARTILLERY, SELF-PROPELLLED: 155-mm, M53(T97).*

Differences among models

The binocular M17 has been modified to the M17A1 to accommodate the filter M1 and to replace the rubber eye guards with a phenolic type.

Data plate location

Data is located on the left cover plate.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Magnification	7 power
Aperture	50-mm
Field of view	7 deg, 16 min
Exit pupil	0.280 in.
"F" number of objective	F/3.9
Reticle horizontal scale	50-0-50 mils
Reticle range scale	0 to 2,000 yd
Filter	M1

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6650-211-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10¼ in.
Width	1 ft, 8¼ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

Outside Continental United States

Shipped 12 binoculars (w/equipment) per shipping container

Length	2 ft, 10¼ in.
Width	1 ft, 8¼ in.
Height	1 ft
Volume	4.9 cu ft
Gross weight	120 lb
Ship tons	0.12

References: TM 9-1580, TM 9-6650-211-12; TM 9-6650-211-12P, TM 9-6650-208-35P.

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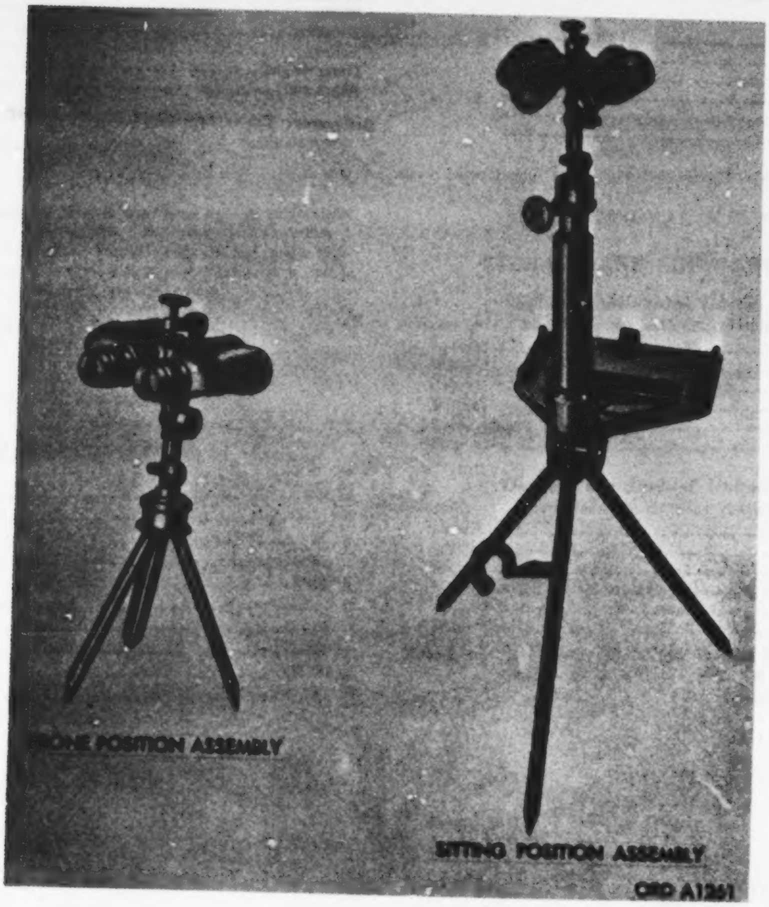
*For characteristics and data, see items on pages 27-3, 27-4, and 27-6 and in section 23.

BINOCULAR: GUNNER'S, GUIDED MISSILE, WITH TRIPOD



Model	*Line item No.*	*Federal stock No.*
		REDSTONE ARSENAL RSA-10021841

General

BINOCULAR: gunner's guided missile, is a component part of wire-guided, remotely-controlled surface-to-surface SYSTEM, GUIDED MISSILE, ANTITANK: SS-10/SS-11,* and is used as an aid to the gunner for long range targets in visually tracking and guiding the missile in flight. The guided missile gunner's binocular is mounted on a tripod, and is secured in place by a clamp and a lock screw. There are two types of tripods available, one for use in the lying down or prone position and the other for the sitting position. When folded, the legs of the small tripod can be inserted into the tubular support of the large tripod, thereby supplying the clamp and lock screw assembly. At the junction of its three legs, the large tripod has a steel plate which serves as a support for the manually operated control stick used for directing the flight of the missile electrically through command wires 1,800 yards long, which unwind from the within the missile during flight. A 100-meter (328 feet) cable from the control stick to the signal generator allows the gunner using the binocular to select an observation point removed from the !aunching site.

Difference among models

Data plate location

Classification

CHARACTERISTICS

Magnification	8 x
Combined binocular and sitting position tripod:	
Length	39⅝ in.
Width	12¾ in.
Height	10¾ in.
Weight	14.32 lb
Tripod, prone position:	
Length	9¾ in.
Weight	1.76 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

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* For characteristics and data, see items in section 19.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per

Length..

Width..

Height..

Volume..

Gross weight..

Ship tons..

Outside Continental United States

Shipped per

Length..

Width..

Height..

Volume..

Gross weight..

Ship tons..

References: TM 9-1400-450-12; 20; 30; and 35P.

BINOCULAR; INFRARED M18

(Illustration will be added at a later date)

Model	*Line item No.*	*Federal stock No.*
M18	4-01254-10	6650-863-5657

General

BINOCULAR: INFRARED. M18 is employed by the commander of a tank for infra-red observations. The binocular resembles a conventional hand-held binocular, but it contains an image converter tube in each of its two infra-red optical channels, a reticle projection system, and an electric power unit.

Differences among models

Data plate location

Classification: Standard A (AMCTCM 897).

CHARACTERISTICS

Magnification	3.5X
Field of view	12.5 deg
Equivalent focal length of objective	3.78 in.
Clear-eye distance	0.42 in.
Diopter (one)	0.018 in.
Interpupillary adjustment limits	64 m and 75 m
Weight	4.75 lb
Length	10.625 in.
Width	5.75 in.
Height	4.375 in.

PERFORMANCE EQUIPMENT

Basic Issue Items: See TM 9-6650-215-12 (when available).

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

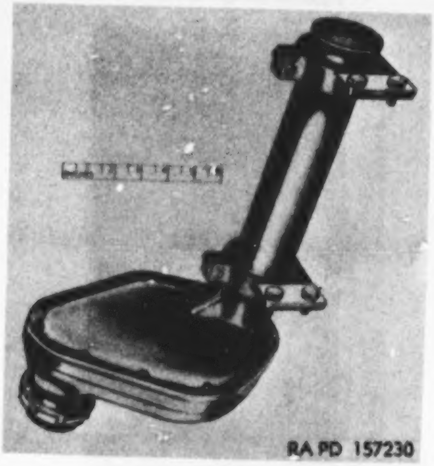
Shipped binoculars per shipping container
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped binoculars per shipping container
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-6650-215-12, TM 9-6650-215-20P, TM 9-6650-215-34, TM 9-6650-215-35P, TM 9-6650-215-50. (When available)

MOUNT, INDICATOR, ORD No. 7694893



Secondary Item

Model	*Line item No.*	*Federal stock No.*
(as above)	....	6650-769-4893

General

MOUNT, INDICATOR, ORD NO. 7694893, supports INDICATOR, AZIMUTH: M24 (T23)* and is used with LOCAL CONTROL SYSTEM, ANTIAIRCRAFT GUN: M16A1* on GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED: twin, 40-mm M19A1.*

The mount consists of a gear housing, a coupling, which connects mount to traversing mechanism pinion shaft, and a vertical enclosed shaft which allows proper location of the indicator. The vertical shaft housing has two spherical mounting surfaces and two adjustable brackets which are located from these surfaces. Setscrews hold and allow adjustment of the indicator, when positioned on the mount.

Differences among models

Data plate location

Classification: Standard B (OTCM 36841).

CHARACTERISTICS

Length, overall	1 ft, 4⅛ in.
Width, overall	8½ in.
Depth, overall	5⅞ in.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped indicator mounts per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped indicator mounts per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: SNL F-355; TM 9-1620.

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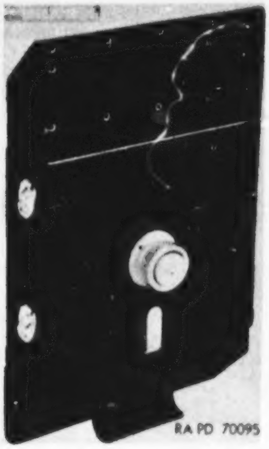
*For characteristics and data, see items in sections 18 and 23.

PERISCOPE, TANK: M6



Secondary item

Model	*Line item No.*	*Federal stock No.*
M6	....	6650-757-8357

General

PERISCOPE, TANK: M6 is a box-shaped instrument of 1 power magnification. It is designed to allow an operator to observe the surrounding terrain without exposing himself. Light rays entering the 90-degree prism of the head assembly are reflected downward through the body assembly to the elbow 90-degree prism, where they are again reflected in a direction parallel to the line-of-sight. Only the upper end or head assembly of the periscope is exposed during use. The head is made of phenolic plastic material and is easily replaced if damaged by a projectile. The lower end or elbow assembly and a large portion of the body assembly are protected by the armor of the vehicle in which the periscope is mounted. A flat spring, locking knob and guide strip mount and hold the periscope in its mount. Eccentric mechanisms are used to secure the elbow and head assemblies to the body assembly.

Periscope M6 is used with the MOUNT, GUN: 40-mm, twin, M4.*

Differences among models

Data plate location

The identification plate is located on the body assembly.

Classification: Standard A.

CHARACTERISTICS

Magnification	1 power
Length	11 in.
Width	6⅛ in.
Thickness	3⅛ in.
Weight	6 ⅝ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See ORD 7 SNL G-248.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 periscopes per shipping container

Length	2 ft, 4½ in.
Width	1 ft, 7 in.
Height	1 ft, 4¼ in.
Volume	5.11 cu ft
Gross weight	173 lb
Ship tons	0.13

Outside Continental United States

Shipped 20 periscopes per shipping container

Length	2 ft, 4½ in.
Width	1 ft, 7 in.
Height	1 ft, 4¼ in.
Volume	5.11 cu ft
Gross weight	173 lb
Ship tons	0.13

References: SNL F-235, TM 9-1608B.

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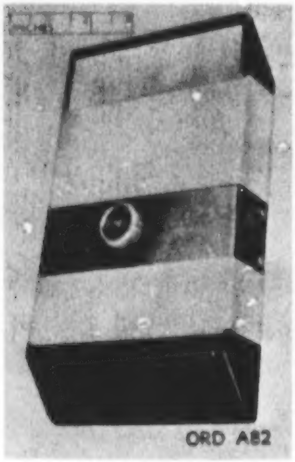
*For characteristics and data, see item in section 3.

PERISCOPE, TANK: M13



Secondary item

Model	*Line item No.*	*Federal stock No.*
M13		6650-759-7754

General

PERISCOPE, TANK: M13 is a box-shaped instrument of 1 power magnification. It is designed to allow an operator to observe the surrounding terrain without exposing himself. Mirrors are sealed at a 45-degree angle to the head and elbow. Light rays entering the head are reflected downward through the body to the elbow, where they are again reflected in a direction parallel to the line-of-sight. Only the upper end of the head of the periscope is exposed during use. The lower end or elbow and a large portion of the body are protected by the armor of the vehicle in which the periscope is mounted. Periscope M13 is of the solid plastic type, and is waterproof. Cemented windows or cover glasses for the head and elbow are provided for protection of the mirrors against dust and water. A locking knob mounts and holds the periscope in its mount.

Periscope M13 is used with the HOWITZER, LIGHT, SELF-PROPELLED: full tracked, 105-mm, M37,* HOWITZER, LIGHT SELF-PROPELLED; 105-mm, M52 (T98E1);* RECOVERY VEHICLE, FULL-TRACKED: Medium M74;* and TANK, COMBAT FULL-TRACKED: 90-mm gun, M47.*

Differences among models

Data plate location

Model number is shown on the body assembly.

Classification: Standard A (OTCM 36505).

CHARACTERISTICS

Magnification	1 power
Field of view:	
Horizontally	90 deg
Vertically	25 deg
Length	11¾ in.
Width	6½ ' .
Thickness	2½ in.
Weight	6½ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-7204.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 20 periscopes per shipping container

Length	2 ft, 4½ in.
Width	1 ft, 7 in.
Height	1 ft, 4¼ in.
Volume	5.11 cu ft
Gross weight	173 lb
Ship tons	0.13

Outside Continental United States

Shipped 20 periscopes per shipping container

Length	2 ft, 4½ in.
Width	1 ft, 7 in.
Height	1 ft, 4¼ in.
Volume	5.11 cu ft
Gross weight	173 lb
Ship tons	0.13

References: TM 9-1608E, TM 9-6650-206-35P.

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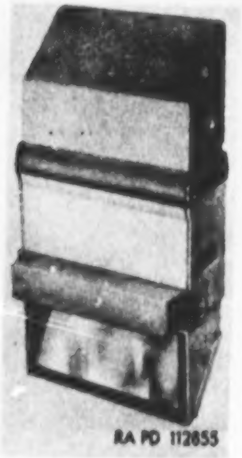
*For characteristics and data, see item in sections 21 and 23.

PERISCOPE, TANK: M14A1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Secondary item

Model	*Line item No.*	*Federal stock No.*
M14A1	....	6650-769-4378

General

PERISCOPE, TANK: M14A1, is a box-shaped instrument of 1 power magnification, used in tanks equipped with bulldoser for general observation of the terrain and for closeup view of the bulldoser blade in contact with the ground, so that the operator does not expose himself. Mirrors are sealed at a 45 degree angle to the head and elbow. Light rays entering the head are reflected downward through the body to the elbow, where they are again reflected in a direction parallel to the line-of-sight. Only the upper end of the head of the periscope is exposed during use. The lower end or elbow and a large portion of the body are protected by the armor of the vehicle in which the periscope is mounted. Periscope M14A1 is of solid plastic construction and is shock resistant. Cemented windows or cover glasses for the head and elbow are provided for protection of the mirrors against dust. This periscope is of the wide angle type. It is secured in an adapter assembly.

Differences among models

Data plate location

Data plate is located on the body assembly.

Classification:

CHARACTERISTICS

Magnification	1 power
Field of view:	
Horizontally	90 deg
Vertically	30 deg to 40 deg
Length	18¼ in.
Width	7 in.
Thickness	4 in.
Weight	18½ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-723

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscopes per shipping container.

Length	2 ft, 7 in.
Width	1 ft, 6 in.
Height	11¼ in.
Volume	2.9 cu ft
Gross weight	126 lb
Ship tons	0.07

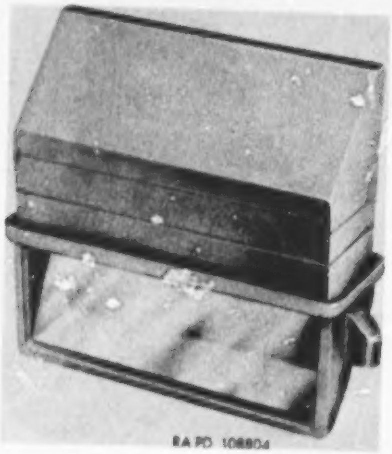
Outside Continental United States

Shipped 6 periscopes per shipping container.

Length	2 ft, 7 in.
Width	1 ft, 6 in.
Height	11¼ in.
Volume	2.9 cu ft
Gross weight	126 lb
Ship tons	0.07

References: SNL F-235, Vol. 5; TM 9-1608E.

PERISCOPE: M17



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M17	....	6650-704-3549

General

PERISCOPE: M17 is a box shaped, solid plastic instrument of the short offset type, wide angle, and 1 power magnification. It is used solely for observation purposes by the driver, assistant driver, and commander. It is designed to allow an operator to observe the surrounding terrain without exposing himself. It consists of the body assembly and the upper and lower covers. Mirrors are sealed at a 45° angle to the upper and lower ends of the body. Light rays entering the upper end are reflected downward through the body to the lower end, where they are again reflected in a direction parallel to the line-of-sight. Only the upper end of the periscope is exposed during use. The lower end and large portion of the body are protected by the armor of the vehicle in which the periscope is mounted. Cemented windows or cover glasses for the upper and lower ends of the body are provided for protection of the mirrors against dust and water. The periscope M17 is waterproof.

Periscope M17 is used with the GUN, SELF-PROPELLED, FULL-TRACKED: 155-mm, M53;* HOWITZER, SELF-PROPELLED, FULL-TRACKED: 8-inch, M55;* CARRIER, PERSONNEL, FULL-TRACKED: armored, M75;* CARRIER, CARGO, AMPHIBIOUS: M76;* TANK, COMBAT, FULL-TRACKED: 76-mm, M41 and M41A1;* TANK, COMBAT, FULL-TRACKED: 90-mm gun, M48 and M48C;* TANK, COMBAT, FULL-TRACKED: 120-mm gun, M103;* RECOVERY VEHICLE: heavy, M51;* CARRIER, PERSONNEL, FULL-TRACKED: armored, M59;* HOWITZER, LIGHT SELF-PROPELLED, FULL-TRACKED: 105-mm, M52;* MORTAR, SELF-PROPELLED, FULL-TRACKED: 4.2-inch, M84;* and CARRIER PERSONNEL, FULL-TRACKED: armored, M113.*

Differences among models

Data plate location

The name and model number are stamped on the upper cover.

Classification: Standard A (OTCM 36505)

CHARACTERISTICS

Magnification	1 power
Field of view:	
Horizontal	150 deg
Vertical	50 deg
Length	8¼ in.
Width	8¾ in.
Thickness	3 in.
Weight	6½ lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 8 periscopes per shipping container

Length	1 ft, 7 in.
Width	1 ft, 4⅛ in.
Height	11¼ in.
Volume	2.024 cu ft
Gross weight	65.75 lb
Ship tons	0.05

Outside Continental United States

Shipped 8 periscopes per shipping container

Length	1 ft, 7 in.
Width	1 ft, 4⅛ in.
Height	11¼ in.
Volume	2.024 cu ft
Gross weight	65.75 lb
Ship tons	0.05

References: TM 9-1608E, TM 9-6650-213-35P.

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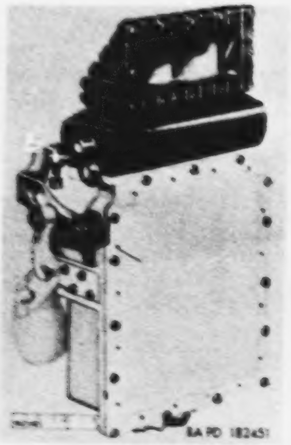
*For characteristics and data, see items in sections 21 and 23.

PERISCOPE, TANK: M19



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M19	....	6650-765-2971

General

PERISCOPE, TANK: M19 is an infrared viewing device of the binocular type used in night driving of armored vehicles. Invisible infrared rays are projected forward from headlamps at the bow of the vehicle to "illuminate" the field of view. The periscope converts the infrared image to a visible image by means of infrared image-convertor electronic tubes. The visible image is viewed through conventional eyelenses. For best vision at average speeds, the range of the periscope is focused at 18 yards. The head assembly projects through the armor and the body of the periscope is within the vehicle. The elevation lock assembly provides for locking the periscope in any position. An adjustable headrest assembly provides support for the operator and adjustment for eye distance from the eye lens.

Periscope M19 is used with the TANK, COMBAT, FULL-TRACKED: 76-mm gun, M41 and M41A1;* GUN, ANTIAIRCRAFT ARTILLERY, SELF-PROPELLED, twin, 40-mm, M42 and M42A1;* TANK, COMBAT, FULL-TRACKED: 90-mm gun, M47;* RECOVERY VEHICLE: heavy, M51;* RECOVERY VEHICLE, FULL-TRACKED: medium, M74;* CARRIER, PERSONNEL, FULL-TRACKED: armored, M59 and M75;* CARRIER, CARGO, AMPHIBIOUS: M76.*

Differences among models

Data plate location

The identification plate is located on the body.

Classification: Standard A (OTCM 36506).

CHARACTERISTICS

Depth	6 in.
Width	8⅛ in.
Height	15⅛ in.
Weight	15 lb, 10 oz.
Magnification	1 power
Field of view	26.8 deg
Focal point	18-20 yd
Operating voltage	16,000 volts

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2300-203-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscopes per shipping container

Length	3 ft, 1⅛ in.
Width	2 ft, 6 in.
Height	1 ft, 7⅛ in.
Volume	12.5 cu ft
Gross weight	189.25 lb
Ship tons	0.31

Outside Continental United States

Shipped 6 periscopes per shipping container

Length	3 ft, 1⅛ in.
Width	2 ft, 6 in.
Height	1 ft, 7⅛ in.
Volume	12.5 cu ft
Gross weight	189.25 lb
Ship tons	0.31

References: TM-9-6059, TM 9-6650-217-34, TM 9-6650-217-35P.

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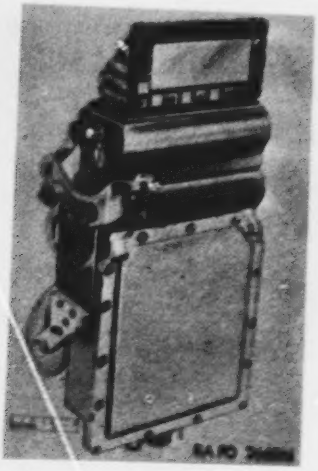
*For characteristics and data, see items in sections 21 and 23.

PERISCOPE, TANK: M24 (T41)



Secondary item

Model	*Line item No.*	*Federal stock No.*
M24	....	6650-344-4647

General

PERISCOPE, TANK: M24(T41) is an infrared viewing device of the binocular type used in night driving of tanks. Invisible infrared rays are projected forward from headlamps at the bow of the vehicle to illuminate the field of view. The periscope converts the infrared image to a visible image which is viewed through conventional eyelenses. The power supply unit, which is contained in the vehicle, provides all power for operation of the periscope.

The periscope M24 is used with TANK, COMBAT, FULL TRACKED: 90-mm gun, M48 series;* TANK, COMBAT, FULL TRACKED: 120-mm gun, M103 and M103A1;* TANK, COMBAT, FULL TRACKED: 105-mm gun, M60;* and RECOVERY VEHICLE, FULL TRACKED: medium, M88.*

Differences among models

Data plate location

The identification plate (nameplate) is located on the rear of the periscope body.

Classification: Standard A (OTCM 37002).

CHARACTERISTICS

Depth ....
Width .... 6 in.
Height .... 8¼ in.
Weight .... 1 ft, 6½ in.
Magnification .... 16 lb
.... 1 power
Field of view .... 26.5 deg
Focal point .... 15 to 20 yds
Operating voltage .... 16,000 v dc

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-206-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 6 periscopes per shipping container
Length ....
Width .... 3 ft, 1⅛ in.
Height .... 2 ft, 6 in.
Volume .... 1 ft, 8⅝ in.
Gross weight .... 13.5 cu ft
Ship tons .... 216.5 lb
.... 0.34

Outside Continental United States

Shipped 6 periscopes per shipping container
Length ....
Width .... 3 ft, 1⅛ in.
Height .... 2 ft, 6 in.
Volume .... 1 ft, 8⅝ in.
Gross weight .... 13.5 cu ft
Ship tons .... 216.5 lb
.... 0.34

References: TM 9-6650-216-34, TM 9-6650-216-34P, TM 9-6650-216-50.

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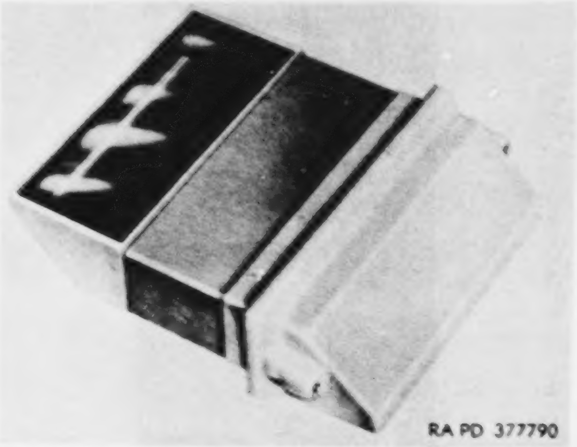
*For characteristics and data, see items in sections 21 and 22.

PERISCOPE, TANK: M27 (T36)



RA PD 377790

Secondary item

Model	*Line item No.*	*Federal stock No.*
M27		6650-344-4643

General

PERISCOPE, TANK: M27 (T36), mounted in the periscope mounts around the driver's hatch opening of TANK, COMBAT, FULL TRACKED: 90-mm gun, M48A1, M48A2, and M48A2C,* TANK, COMBAT, FULL TRACKED: 105-mm gun, M60;* and TANK, COMBAT, FULL TRACKED: 120-mm gun, M103* (serial numbers 60 and above) and M103A1;* HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, T196E1;* and HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, T196E1,* is used for observation of terrain.

The periscope is of solid plastic with a single power of magnification.

Differences among models

Data plate location

The identification plate (nameplate) is located on the body assembly of the periscope.

Classification: Standard A

CHARACTERISTICS

Height	10½ in.
Width overall	9⅝ in.
Depth overall	8 5/16 in.
Weight	7½ lb
Magnification	1 power
Field of view (maximum)	
Horizontal	121 deg
Vertical	41 deg

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-215-10.

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 12 periscopes per shipping container

Length	2 ft, 1⅝ in.
Width	1 ft, 10½ in.
Height	1 ft, ⅝ in.
Volume	4.275 cu ft
Gross weight	153.65 lb
Ship tons	0.11

Outside Continental United States

Shipped 12 periscopes per shipping container

Length	2 ft, 1⅝ in.
Width	1 ft, 10½ in.
Height	1 ft, ⅝ in.
Volume	4.275 cu ft
Gross weight	153.65 lb
Ship tons	0.11

References: SNL F-235, Vol. 18.

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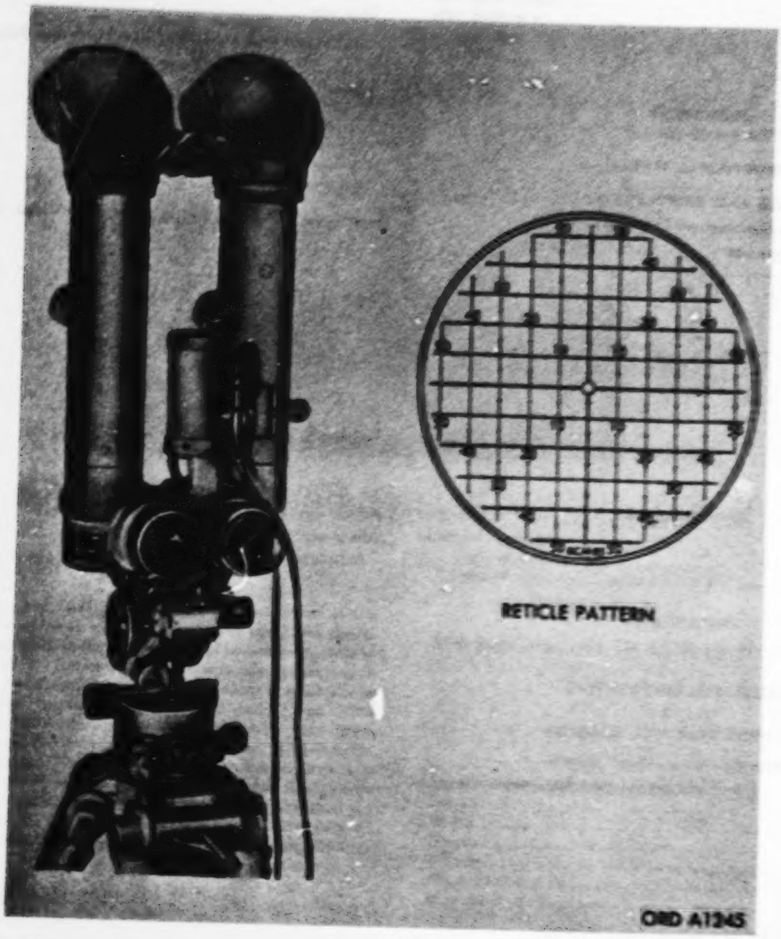
*For characteristics and data, see items in section 23.

TELESCOPE, BATTERY COMMANDER'S: M65



Model	*Major item* *Line item No.*	*Federal stock No.*
M65	4-49760-00	6650-678-5577

General

TELESCOPE, BATTERY COMMANDER'S: M65, is a binocular instrument of the periscopic type, the eyepiece being about 12 inches below the line-of-sight. It consists of two telescope assemblies, joined at the top by a hinge mechanism and at the bottom by an interpupillary mechanism and knob. It can be used only with the telescopes in a vertical position and is used for observation and for measuring angles of site and azimuth for artillery fire. The right telescope has a laterally and vertically graduated reticle which permits measurement of small vertical (both below and above the horizontal) and horizontal angles within the limits of the field of view. Each telescope eyepiece has an individual diopter adjustment. An elevating knob and angle of sight mechanism permit measurement of larger vertical angles that can be measured within the field of view. The telescope is supported on a mount which contains a circular level dial for leveling the instrument, and an azimuth scale and micrometer for measuring large azimuth angles, and orientation knob for positioning the instrument on the short tripod M10 or the longer tripod M17 to orient the azimuth scales. Each telescope is provided with filters, amber, red, neutral, and a clear window. Instrument light M28 provides edge illumination for the reticle. Another lamp, on a flexible cable, is used as a head light to read the scales and micrometers.

Differences among models

Data plate location

The identification plate is located on the left telescope.

Classification: Standard B (OTCM 37927)

CHARACTERISTICS

Magnification	10X
Field of view	6°
Diopter scale	±3 diopters
Interpupillary scale	60 to 70-mm
Elevation and horizontal reticle graduations	0 to ± 50 mils
Height	18½ in.
Length	8 in.
Width	7 in.
Weight	20 lb

PERFORMANCE

Limits of operation:

Angle of site	−300 to +300 mils
Azimuth	0 to 6,400 mils (360° deg, no limit of operation)

EQUIPMENT

Basic Issue Items: See TM 9-6650-204-12P

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 B.C. telescope per box.

Length	4 ft. 5 in.
Width	1 ft. 10 in
Height	1 ft
Volume	7.9 cu ft
Gross weight	150 lb
Ship tons	0.20

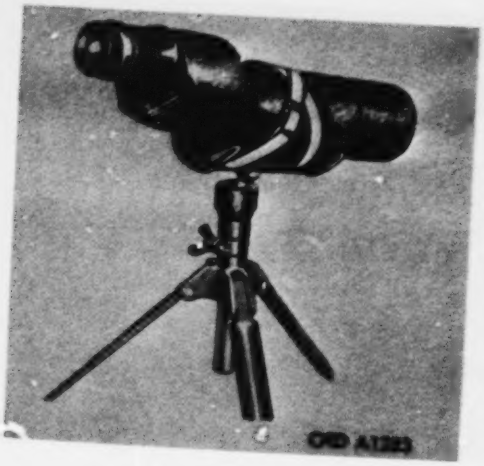
Outside Continental United States

Shipped B.C. telescopes per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-259, TM 9-575, TM 9-1580, TM 9-6650-204-12P.

TELESCOPE: OBSERVATION, M48



Model	*Major item Line item No.*	*Federal stock No.*
M48	4-49980-10	6650-678-5627

General

TELESCOPE: observation, M48, is an erect-image instrument of the prism-offset type, the image being erected by means of two Porro prisms and magnified by the lenses in the eyepiece. It has no reticle, is of fixed magnification, and is used only for observation. It is focused by pushing or pulling the eyepiece in or out until an approximate focus is reached and then turning the knurled focusing sleeve to obtain exact focus. This arrangement is made possible by a spring-loaded ball which either rides over the threads or engages the threads of the focusing nut. The observation telescope M48 is strapped in position in a cradle which in turn is supported on the tripod M14, which supports the instrument about 1 foot above the ground. The tripod provides for full rotation in azimuth of the cradle and telescope, and for limited rotation in elevation. The front of the telescope has a sliding sunshade which can be extended approximately 2 inches.

Differences among models

Data plate location

The identification plate is located on the prism housing.

Classification: Standard A(OTCM 36841).

CHARACTERISTICS

Magnification	
Field of view	19.6X
Height	2°, 8 min
Length	3 in.
Width	14⅝ in.
Weight	3 in.
	4 lb

PERFORMANCE

Limits of operation:

Angle of site	Limited rotation
Azimuth	No limit of operation

EQUIPMENT

Basic Issue Items: See TM 9-6650-201-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 observation telescope per box.

Length	
Width	1 ft, 5 in.
Height	5 in.
Volume	5 in.
Gross weight	0.3 cu ft
Ship tons	5 lb
	0.01

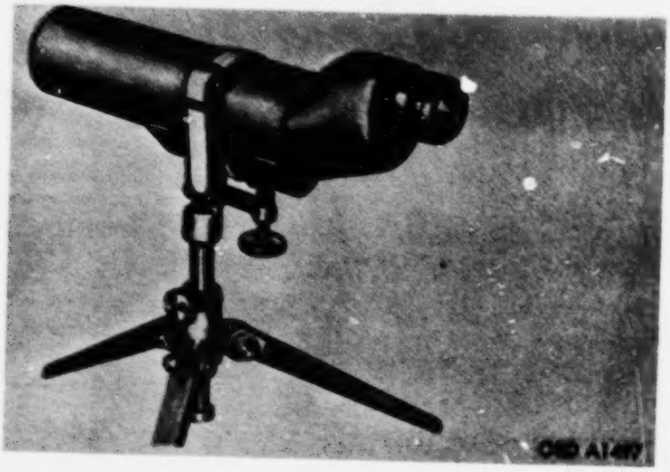
Outside Continental United States

Shipped observation telescope per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-173, TM 9-373, TM 9-1556, TM 9-6650-201-12.

TELESCOPE: OBSERVATION, M49



Model	*Major item* *Line item No.*	*Federal stock No.*
M49	4-49980-20	6650-530-0960

General

TELESCOPE, observation, M49, is an erect-image instrument of the prism-offset type, the image being erected by means of two Porro prisms and magnified by the lenses in the eyepiece. It has no reticle, is of fixed magnification, and is used only for observation. It is focused by turning the knurled focusing sleeve. The observation telescope M49 is strapped in position in a cradle which in turn is supported on the tripod M15, which supports the instrument about 1 foot above the ground. The tripod provides for full rotation in azimuth of the cradle and telescope, and in conjunction with a thumbscrew, for limited rotation in elevation.

Differences among models

Data plate location

The identification plate is located on the prism housing.

Classification: Standard B (OTCM 37119).

CHARACTERISTICS

Magnification	20X
Field of view	2°, 12 min
Height	3½ in
Length	15 in
Width	2½ in
Weight	4 lb

PERFORMANCE

Limits of operation:

Angle of site	Limited rotation
Azimuth	No limit of operation

EQUIPMENT

Basic Issue Items: See TM 9-6650-212-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 observation telescope per box.

Length	1 ft, 5 in.
Width	5 in.
Height	5 in.
Volume	0.3 cu ft
Gross weight	5 lb
Ship tons	0.01

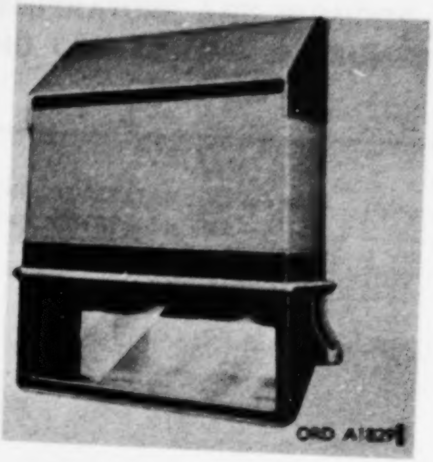
Outside Continental United States

Shipped observation telescope per box.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: SNL F-173, TM 9-575, TM 9-1556, TM 9-6650-212-12.

PERISCOPE, TANK: M45



Secondary Item

Model	*Line item No.*	*Federal stock No.*
XM45		6650-509-2743

General

PERISCOPE, TANK: M45 is used on HOWITZER, LIGHT, SELF-PROPELLED: 105-mm, T195E1 and HOWITZER, MEDIUM, SELF-PROPELLED: 155-mm, T196E1.

Differences among models

Data plate location

Data is engraved in the head of periscope.

Classification: Standard A

CHARACTERISTICS

Magnification	1 power
Field of view:	
Horizontal	38 deg
Vertical	10 deg
Length	1 ft, 2 in.
Width	8 in.
Thickness	2.42 in.
Weight	8.50 lb

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-2350-217-10.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 10 per shipping container

Length	
Width	
Height	
Volume	
Gross weight	146 lb
Ship tons	

Outside Continental United States

Shipped 10 per shipping container

Length	
Width	
Height	
Volume	
Gross weight	146 lb
Ship tons	

References:

SECTION 28

PRESSURE, TEMPERATURE, AND HUMIDITY MEASURING AND CONTROLLING INSTRUMENTS

(Class 6685)

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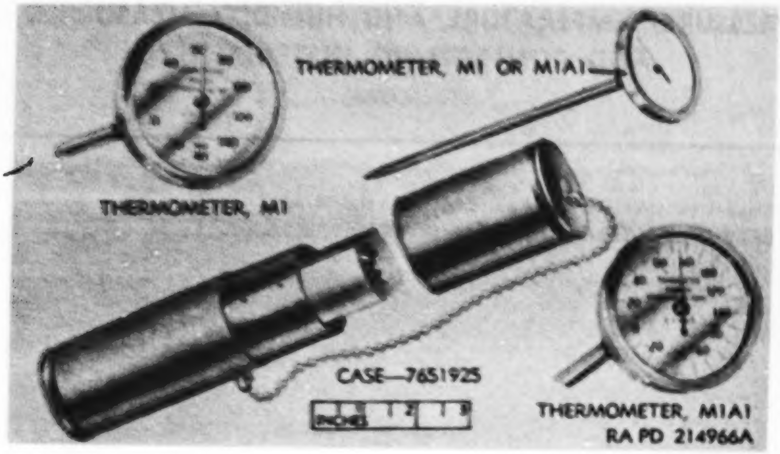
THERMOMETER, SELF-INDICATING, BIMETALLIC: M2 28-3

THERMOMETER, SELF-INDICATING, BIMETALLIC: M1 AND M1A1



RA PD 214966A

Secondary item

Model	*Line item No.*	*Federal stock No.*
M1		6685-678-5736
M1A1, w/e		6685-344-6603

General

THERMOMETER, SELF-INDICATING, BIMETALLIC: M1 or M1A1, is used for measuring powder temperatures of 90-mm and 120-mm ammunition. The thermometer can be inserted directly into separate-loading propelling charges or can be used as a component of INDICATOR, POWDER TEMPERATURE: M13 or M15* for lot ammunition.

The thermometer is a dial type with 6-inch stem.

Differences among models

On the M1, the lowest temperature indicated on the dial is −40° F., while on the M1A1 the lowest temperature indicated is −80° F.

Data plate location

Data is located on the face of the dial.

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Temperature range:	
M1	−40° F. to +160° F.
M1A1	−80° F. to +160° F.
Length overall	
Diameter of dial	

* Ammunition item.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6685-200-12P.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

Outside Continental United States

Shipped per
Length
Width
Height
Volume
Gross weight
Ship tons

References: TM 9-6685-200-12P; TM 9-6685-200-35P.

THERMOMETER, SELF-INDICATING, BIMETALLIC: M2 (XM2E1)

Model	*Secondary item* *Line item No.*	*Federal stock No.*
M2		6685-345-6125

General

THERMOMETER, SELF-INDICATING, BIMETALLIC: M2 (XM2E1), is used to measure average propellant grain temperature of the JATO, M6 for ROCKET, 762 MILLIMETER: M31 and M31A1.*

The thermometer consists of a dial, collar, and probe. The dial is inclosed in a chromium plated steel case having a plexiglass front. The dial has a silver background and a black scale. Temperatures are indicated by a black pointer and can be read to less than one degree by interpolation. A setscrew on the back of the dial is provided for adjustment of the thermometer. A standard ¾-inch threaded collar located immediately behind the dial case is used to secure the thermometer when inserted in a rocket motor.

Differences among models

Data plate location

Classification: Standard A (OTCM 36841).

CHARACTERISTICS

Temperature range..
Length overall..
Diameter of dial.. 3 in.

---

* Ammunition item.

PERFORMANCE

EQUIPMENT

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

Outside Continental United States

Shipped per
Length..
Width..
Height..
Volume..
Gross weight..
Ship tons..

References:

SECTION 29

ARMAMENT TRAINING DEVICES

(Class 6920)

(Includes mortar and tank trainers)

Page

ROCKET SET, TRAINING: 762-mm, M49 29-2

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TRAINER, MORTAR: pneumatic, M32 and M32A1 29-4

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TRAINER, TANK GUNNERY: 90-mm gun, M20 (T20) 29-6

TRAINER, TANK GUNNERY: 90-mm gun, M26 29-7

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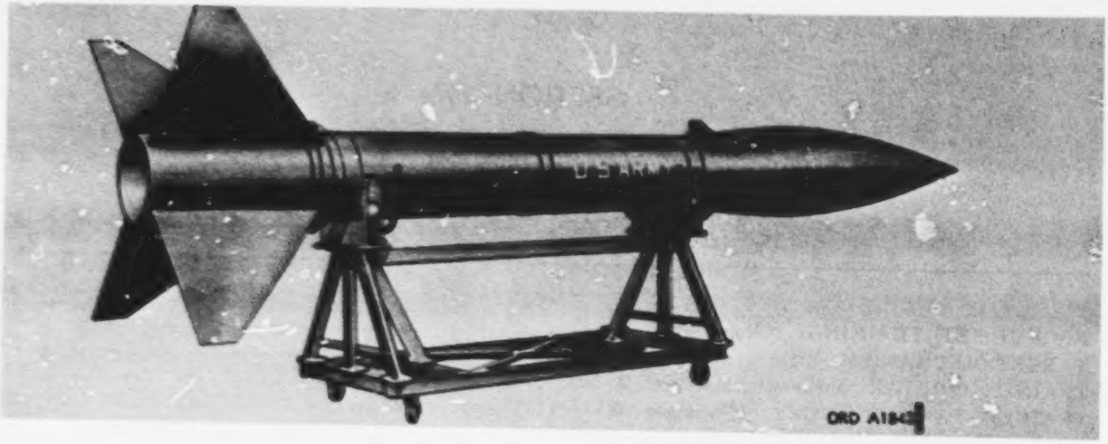
ROCKET SET, TRAINING: 762-mm, M49



Model	*Line item No.*	*Federal stock No.*
M49		6920-611-1897

General

ROCKET SET, TRAINING: 762MM, M49 (formerly known as TRAINING DEVICE, 3-G-42 and 3-G-77), is intended for use as an aid in instruction and practical training of troops in all phases of handling and check out of the operational 762MM M31 and M50 series rockets. The training set is made up of components that are full size in weight and configuration to their tactical counterparts. The M49 ROCKET SET, TRAINING, consists of the following components with the tactical counterparts listed therewith:

Item	*Tactical*	*Trainer*
Rocket Motor, M50 Series Rkt	M66	M98
Rocket Motor, M31 Series Rkt	M3 Series	M84
Warhead (Z)	M6	M42
Warhead (X)	M27, M47, M48	M72
Warhead (Z)	M144	M132

The training rockets are so designed that the launching shoes and alignment points will fit operational handling and launching equipment. The alignment points between trainer fins, rocket motors, and warheads will not mate with tactical components due to addition of noninterchangeable pins purposely placed on trainer components to insure against training or tactical accidents.

Differences among models

Data plate location

Classification: Standard A (AMCTCM 641).

CHARACTERISTICS

Rocket Motor, Training: 762MM, M98

Length	182.5 in.
Weight	3,095 lb
Diameter (w/o fins & launching shoes)	27.1 in.

Fins, Training, M98 Rocket Motor, M17

Weight (Individual)	33 lb.

Rocket Motor, Training: 762MM, M84

Length	212 in.
Weight	4,002 lb
Diameter (w/o fins, at forward launching shoe)	33 in.

Fins, Training, M84 Rocket Motor, M132A2

Weight (Individual)	41 lb

Warhead Section, M42 (for M84 Rkt Motors)

Length	115.25 in.
Weight	1,625 lb.
Diameter	30.08 in.

Warhead Section, M72 (for Both M98 & M84 Rkt Motors)

Length	115.25 in.
Weight	1,200 lb
Diameter	30.08 in.

Warhead Section, M132 (for Both M98 & M84 Rkt Motors)

Length	115.25 in.
Weight	1,625 lb
Diameter	30.08 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6920-213-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within and Outside Continental United States

Shipped 1 inert warhead assembly per shipping container.

Length	147 in.
Width	47 in.
Height	56 in.
Volume	
Gross weight	3,300 lb
Ship tons	

Shipped 1 simulated rocket motor per shipping container.

Length	239 in.
Width	41 in.
Height	50 in.
Volume	
Gross weight	6,380 lb
Ship tons	

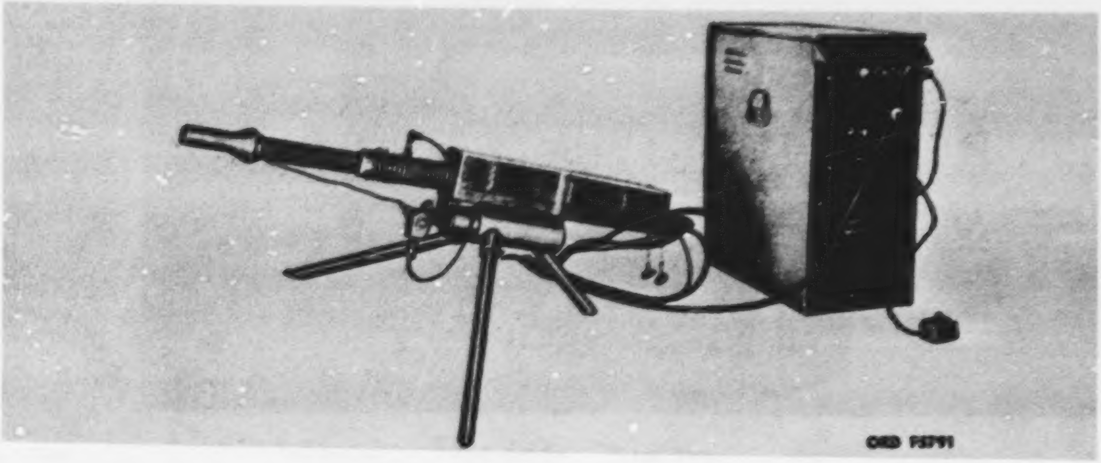
Shipped 4 training fins per shipping container.

Length	
Width	
Height	
Volume	28.7 cu ft
Gross weight	352 lb
Ship tons	

References: TM 9-6920-213-12, TM 9-6920-213-20P, TM 9-6920-213-34, TM 9-6920-213-34P.

*For characteristics and data, see item in section 19 (pages 19-227 and 19-229).

SIMULATOR, SMALL ARMS FIRE: M2 (XM2)



Model	*Line item No.*	*Federal stock No.*
M2 (XM2)		6920-649-9282

General

SIMULATOR, SMALL ARMS FIRE: M2(XM2) is used to produce flash, noise, and smoke to simulate either rifle or machinegun fire. It can be used singly or in multiples to simulate individual soldiers or whole squads of the enemy. The simulator consists of a simulator gun assembly, a cabinet group with timer assembly, and a remote control cable assembly. It operates on either 115-volt ac or 12-volt dc. The operator may control a simulator directly at the timer assembly, or he may control many simulators by means of remote control cables.

Differences among models

Data plate location:

The identification plate is riveted to the rearward top surface of the simulator gun assembly cover.

Classification: Standard A (AMCTC item 1982).

CHARACTERISTICS

Weight:	
Simulator gun assembly	46.75 lb
Cabinet group	182.89 lb
Cylinders:	
Smoke (filled)	5.34 lb
Oxygen (filled)	24.86 lb*
Propane (filled)	12.84 lb*
Cylinder capacity:	
Oxygen	10,000 rd
Propane	20,000 rd

Dimensions:	*Length*	*Width*	*Height*
Simulator gun assembly	53½ in.	44½ in.	20 in.
Cabinet group	24¼ in.	15½ in.	29¾ in.
Timer assembly	12 in.	14½ in.	9½ in.

AMMUNITION

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6920-204-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped
Length ____________
Width ____________
Height ____________
Volume ____________
Ship tons ____________

Outside Continental United States

Shipped
Length ____________
Width ____________
Height ____________
Volume ____________
Ship tons ____________

References: TM 9-6920-204-14, TM 9-6920-204-24P.

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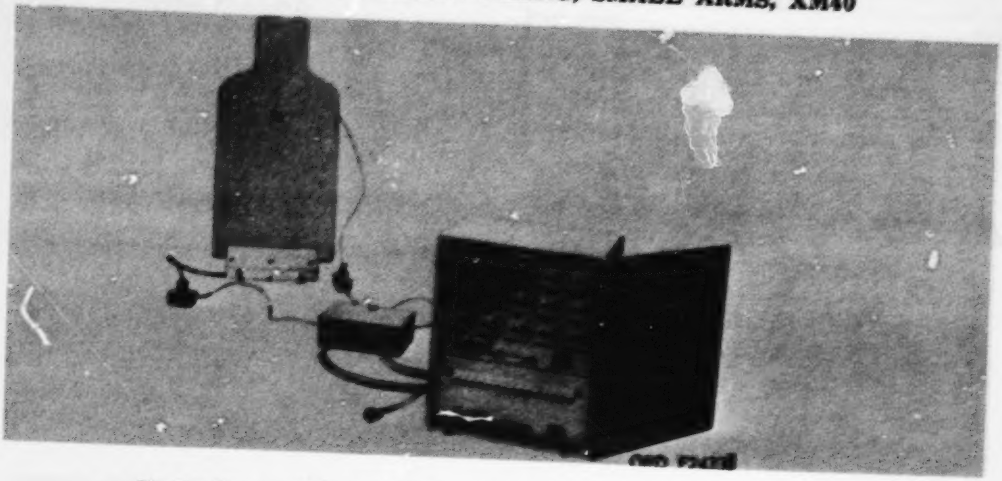
*Cylinders are shipped empty to comply with ICC regulations.

TARGET MECHANISM: NIGHT FIRING, SMALL ARMS, XM40



Model	*Line item No.*	*Federal stock No.*
XM40		6920–678–6478

General

TARGET MECHANISM: night firing, small arms, XM40, is a portable, electro-mechanical training device to be used for training in night firing of small arms. A light attached to the target flashes to simulate the flash of rifle or machinegun fire and presents a barely discernible silhouette for the soldier to fire at. The target mechanism permits its operator to control 15 target locations and will accommodate either kneeling silhouette target "E" or prone silhouette target "F". The target mechanism consists of a cabinet assembly (which serves as a housing for a counter chassis assembly and a flasher chassis assembly), one (1) terminal box assembly, 15 target holding assemblies, 15 hit switch assemblies, and 30 utility box assemblies. A 115-volt power source is required for operation of the target mechanism. It can be carried by two men.

Differences among models

Data plate location

The identification plate is located on the upper center exterior surface of the door of the cabinet assembly.

Classification:

CHARACTERISTICS

Cabinet:	
Weight	44 lb
Length	21 in.
Width	$14\frac{7}{16}$ in.
Height	$23\frac{7}{16}$ in.
Flasher chassis:	
Weight	$17\frac{1}{2}$ lb
Length	19 in.
Width	13 in.
Height	$8\frac{5}{8}$ in.
Counter chassis:	
Weight	$29\frac{1}{2}$ lb
Length	19 in.
Width	13 in.
Height	14 in.
Terminal box:	
Weight	15 lb
Length	12 in.
Width	8 in.
Height	4 in.
Target holder:	
Weight	2 lb
Length	$14\frac{3}{4}$ in.
Width	$2\frac{1}{2}$ in.
Height	$23\frac{5}{8}$ in.
Utility box:	
Weight	1 lb
Length	$4\frac{13}{16}$ in.
Width	$2\frac{5}{8}$ in.
Height	2 in.
Electrical system:	
Power source	115 V ac
Lights:	
Target indicator	24–28 V, 0.50 amp
Counter chassis indicator	6–8 V, 0.15 amp
Flasher chassis panel	24–28 V, 0.04 amp
Fuses	2 amp

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6920-205-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 mechanism per shipping container

Length	$37\frac{1}{2}$ in.
Width	25 in.
Height	31 in.
Volume	17.39 cu ft
Gross weight	276 lb
Ship tons	0.436

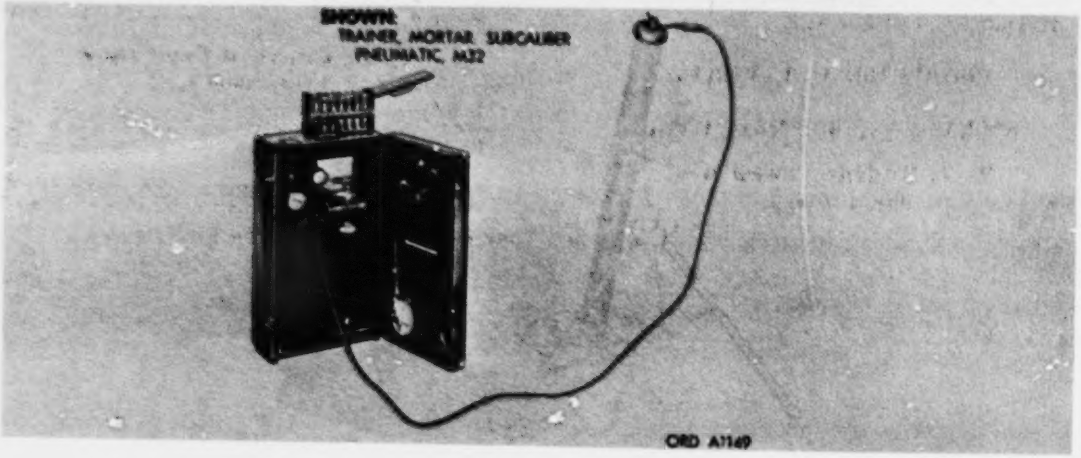
Outside Continental United States

Shipped 1 mechanism per shipping container

Length	$37\frac{1}{2}$ in.
Width	25 in.
Height	31 in.
Volume	17.39 cu ft
Gross weight	276 lb
Ship tons	0.436

References: TM 9-6920-205-14, TM 9-6920-205-24P.

TRAINER, MORTAR: PNEUMATIC, M32 AND M32A1



Secondary Item

Model	*Line item No.*	*Federal stock No.*
M32, w/o cal. .22 blank cartridge		6920-540-6087
M32A1		6920-045-6537

General

TRAINER, MORTAR: PNEUMATIC, M32, or M32A1 is a pneumatically operated unit designed to adapt a 60-mm, 81-mm, or 107-mm (4.2 inch) mortar to fire the 25-mm training projectile M379 on a 500-inch, 1,000-inch, or 2,000-inch range. It is packed in a case complete with: a projectile rack with twenty 25-mm training projectiles M379; a barrel and valve assembly, to adapt the operational mortar to receive the 25-mm projectiles and to release compressed air charges for simulating operational mortar fire; a compressed gas cylinder (bottle and valve assembly) to provide compressed air supply; a regulator assembly, to control the pressure released for each charge, and a quick disconnect hose assembly, for attaching the air supply to the barrel and valve assembly.

Differences among models

The regulator assembly is the only difference between the two models; the M32A1 has an improved regulator which incorporates a relief valve, tee, nipple, and other internal parts.

Data plate location

The identification pate is located in the upper right-hand corner of the left end of the trainer case. A warning sign is located inside the case.

Classification:

M32	Standard C (OCTM 37525)
M32A1	Standard A (OTCM 37525)

CHARACTERISTICS

Trainer M32 complete:	
Length	2 ft, 6 in.
Width	1 ft, 4½ in.
Depth	10 in.
Weight	61 lb
Case (empty):	
Length	2 ft, 6 in.
Width	1 ft, 4½ in.
Depth	10 in.
Weight	20 lb
Compressed air cylinder (bottle with valve assembly):	
Length	1 ft, 11 in.
Outside diameter	7 in.
Air contents	38 cu ft
Pressure:	
Capacity	1,800 psi
Working pressure	2,265 psi
Weight	20 lb
Projectile rack (w/20 projectiles):	
Length	9⅝ in.
Width	3⅝ in.
Depth	7¼ in.
Weight	8 lb
Hose assembly:	
Length	10 ft
Weight	1¾ lb
Inside diameter	¼ in.
Regulator assembly:	
Length	9 in.
Width	7 in.
Depth	4 in.
Weight	3½ lb
Barrel and valve assembly:	
Length	1 ft, 11 in.
Weight	7 lb
Outside diameter	2⅝ in.
Type of operation	pneumatic
Method of feeding	drop
Propellant	compressed air
Number of rounds per 1,800 psi cylinder (approx)	1,200

AMMUNITION

Types ....25-mm training projectile M379 and CARTRIDGE, BLANK, CALIBER .22:

PERFORMANCE

RANGE (approx) ....55 yd

EQUIPMENT

Sighting and fire control:

Use sighting equipment issued with primary weapon listed in "GENERAL" paragraph, except the firing tables.

TABLE, FIRING: IV (modified FT 60-L-1)
TABLE, FIRING: V (modified FT 80-AD-1)
TABLE, FIRING: VI (modified FT-4.2-B-1)

Basic Issue Items: See TM 9-6920-212-14.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 trainer per shipping container.

Length	2 ft, 7⅝ in.
Width	1 ft, 5⅝ in.
Height	11 in.
Volume	3.6 cu ft
Gross weight	56½ lb
Ship tons	0.089

Outside Continental United States

Shipped 1 trainer per shipping container.

Length	1 ft, 8 in.
Width	1 ft, 4½ in.
Height	10 in.
Volume	2.8 cu ft
Gross weight	61 lb
Ship tons	0.07

References: TM 9-6920-212-14, TM 9-6920-212-24P.

TRAINER, TANK GUNNERY: 76-MM GUN, M17 (T17) AND M17A1

(Illustration will be added at a later date)

Major Item

Model	*Line item No.*	*Federal stock No.*
M17	4-57945-10	6920-855-8582
M17A1	4-57945-20	6920-217-2165

General

TRAINER, TANK GUNNERY: 76-mm gun, M17 (T17) and M17A1, is a training aid used to train personnel in the operation of the turret, the 76-mm gun, and the sighting and fire control equipment of TANK, COMBAT, FULL-TRACKED: 76-mm gun, M41* which the M17 is used and TANK, COMBAT, FULL-TRACKED: 76-mm gun M41A1 * which the M17A1 is used.

Differences among models

Data plate location

Classification: Standard A (OTCM 36941).

CHARACTERISTICS

Weight:
  Total ____________________
  Turret stand ____________________
  Canvas cover ____________________
  Length, overall ____________________
  Width ____________________
  Height (overall on base) ____________________
  Height (overall on casters) ____________________
  Armament ____________________
  Diameter ____________________
  Length, gun tube (outside platform) ____________________
  Clearance, base ring to ground ____________________
  Clearance, gun to ground (gun tube level) ____________________

AMMUNITION

EQUIPMENT

Sighting and Fire Control:
(Same as for the TANK, COMBAT, FULL-TRACKED: 76-mm gun M41 and M41A1)*
Basic Issue Items: See TM 9-2350-201-12, C 1.

PERFORMANCE

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped per
  Length ____________________
  Width ____________________
  Height ____________________
  Volume ____________________
  Area ____________________
  Gross weight ____________________
  Ship tons ____________________

Outside Continental United States

Shipped per
  Length ____________________
  Width ____________________
  Height ____________________
  Volume ____________________
  Area ____________________
  Gross weight ____________________
  Ship tons ____________________

References:

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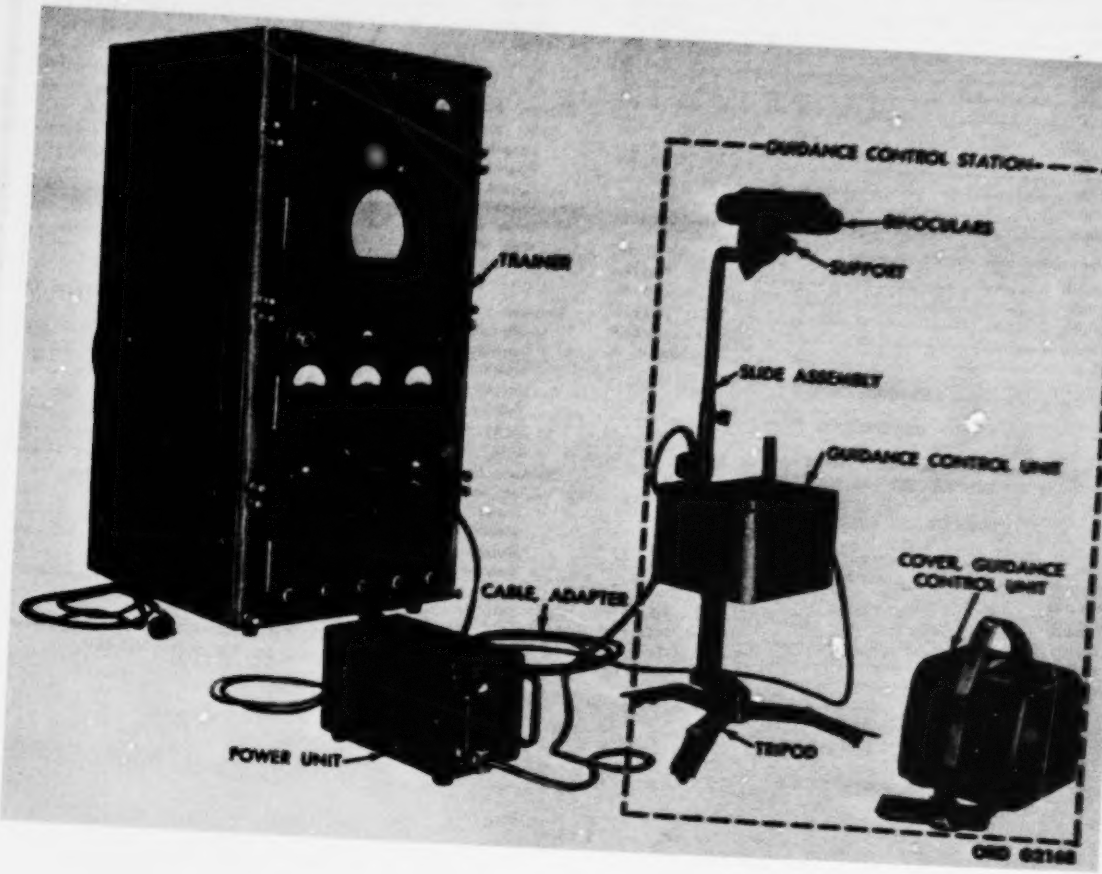
* For characteristics and data, see item in section 23.

TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, 10119920 (SIMULATOR, S-58)



Model	*Line item No.*	*Federal stock No.*
10119920	4-40985-00	6920-870-9508

General

TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, 10119920 (SIMULATOR, S-58), consisting of a TRAINER; GUIDANCE CONTROL STATION; POWER UNIT; and CABLE, ADAPTER; is used for training gunners to control the flight of wire-guided antitank missiles.

The TRAINER (SIMULATOR, S-58) consists of four electrically interconnected chassis, housed in a metal cabinet. The three lower chassis are removable slide-mounted units, while the front panel of the top unit may be removed for servicing and maintenance. The four chassis (top to bottom) are as follows:

1. Autotransformer chassis which provides the regulated voltage required for proper operation of the trainer,
2. Indicator chassis which displays the simulated missile provided by the trainer,
3. Computer chassis which provides the signals that control the flight of the simulated missile displayed on the cathode ray tube screen, and
4. Power supply chassis which contains five regulated, and two unregulated power sections, furnishes the power required for the computer and indicated chassis.

The GUIDANCE CONTROL STATION consists of a battery adapter, binoculars, guidance control unit, slide assembly, tripod, and cover.

The POWER UNIT is a small, portable, dc-power supply which provides a well-filtered and stabilized dc voltage, variable from 11 to 13.5 volts. The output of this unit is used in place of the 13.5-volt rechargeable battery used with the tactical guidance control unit.

The ADAPTER CABLE is used to connect the guidance control unit to the computer chassis of the trainer.

Differences among models

Data plate location:

The data plate is located top center on the top front panel of the trainer.

Classification

CHARACTERISTICS

Trainer (S-58 simulator):

Height	41.33 in.
Width	19.68 in.
Depth	28.83 in.
Weight	288 lb
Weight (storage case)	103 lb
Input	110/220 volt ac, 50/60 cps, sgl-ph

Power unit:

Length	12.84 in.
Width	5.88 in.
Height	8.67 in.
Weight	14.74 lb

Guidance control unit (tripod retracted):

Length	10.2 in.
Width	8.7 in.
Height	14.2 in.
Weight	23.6 lb
Input	12-volt dc

PERFORMANCE

EQUIPMENT

Basic Issue Items: See TM 9-6920-455-12.

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Trainer, S-58, is stored in a storage cabinet, not in a shipping container.

Length	27.5 in. (69.8 cm)
Width	24.5 in. (62.2 cm)
Height	45.4 in. (115.3 cm)
Weight	338 lb (153.3 kg)

Shipped 1 trainer S-58, with cables, as No. 1 of 2 packages, in wooden crate.

Length	36 in. (91.44 cm)
Width	26 in. (66.04 cm)
Height	48 in. (121.9 cm)
Volume	26.0 cu ft
Gross weight	441 lb (200.4 kg)
Ship tons	0.65

Shipped No. 2 of 2 packages in wooden crate containing: 1—adapter cable; 1—guidance control unit; and 1—power unit.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped 1 trainer, S-58, with cables, as No. 1 of 2 packages in wooden crate.

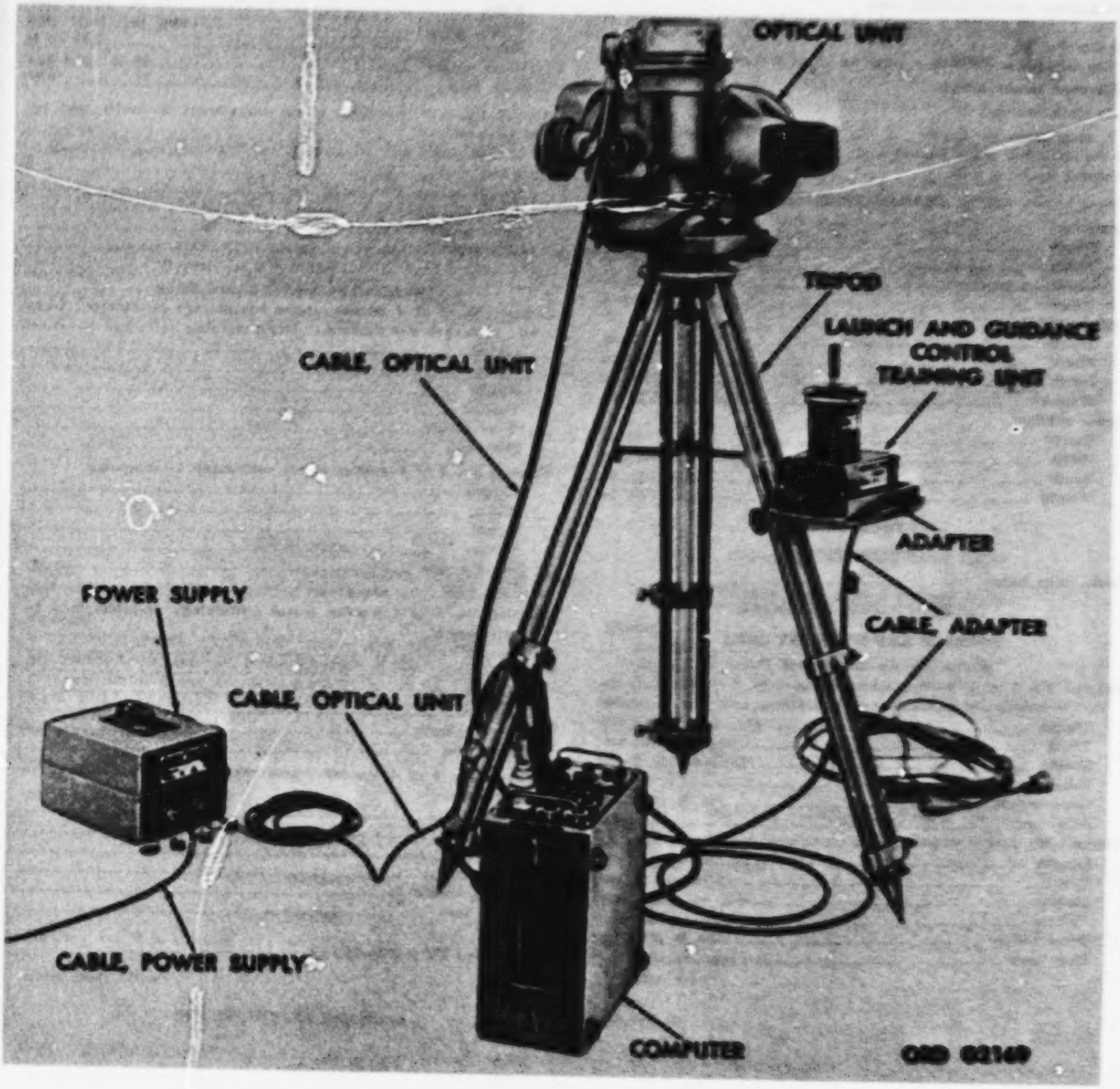
Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped No. 2 of 2 packages in wooden crate containing: 1—adapter cable; 1—guidance control unit; and 1—power unit.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-1400-455-12, TM 9-1400-455-35, TM 9-1400-455-35P, TM 9-6920-455-34, TM 9-6920-455-35P.

TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, DX43 (ENTAC)


OPTICAL UNIT
TRIPOD
LAUNCH AND GUIDANCE CONTROL TRAINING UNIT
CABLE, OPTICAL UNIT
ADAPTER
POWER SUPPLY
CABLE, ADAPTER
CABLE, OPTICAL UNIT
CABLE, POWER SUPPLY
COMPUTER
ORD 02169

Model	*Line item No.*	*Federal stock No.*
DX-43	X-D4210	6920-953-9963

General

TRAINING SET, GUIDED MISSILE FLIGHT CONTROL, DX43 (ENTAC), consisting of a COMPUTER; ADAPTER; CABLES; LAUNCH AND GUIDANCE CONTROL TRAINING UNIT; TRIPOD; POWER SUPPLY; OPTICAL UNIT; is used for training gunners to fire and control the flight of wire-guided antitank missiles.

The COMPUTER is the control center of the training set. Its primary functions are: to receive the basic commands from the control stick; determine how a missile should respond to these commands; then send signals to the optical unit; and to make the simulated missile maneuver accordingly.

The ADAPTER is used for cable connection between the launch and guidance control training unit and the computer.

The CABLES are used for connecting the required components of the training set (see illustration).

The LAUNCH AND GUIDANCE CONTROL TRAINING UNIT is used to develop the operator's feel of the stick and teach the

GENERAL—Continued

firing procedures for firing tactical missiles.

The TRIPOD is used to support the optical unit, and the launch and guidance control training unit.

The POWER SUPPLY provides 24 volts dc for the operation of the training set.

The OPTICAL UNIT is a large set of special-purpose binoculars.

Differences among models

Data plate location:

A data plate is located on the outside of the case of each of the following units: optical unit; power supply; and launch and guidance training unit.

CHARACTERISTICS

Computer:	
Height	6.28 in.
Width	13.78 in.
Depth	11.82 in.
Weight	33.07 lb
Optical unit:	
Height	14.57 in.
Width	17.53 in.
Depth	17.53 in.
Weight	55.12 in.
Power supply:	
Height	7.07 in.
Width	8.67 in.
Depth	11.42 in.
Weight	30.87 in.

PERFORMANCE

EQUIPMENT

Basic Issue Items

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped No. 1 of 4 wooden crates containing: 1—adapter; 1—cable; 1—launch and guidance control training unit; and 1—tripod.

Length	51¼ in. (130.18 cm)
Width	26 in. (66.04 cm)
Height	15½ in. (39.37 cm)
Volume	11.9 cu ft
Gross weight	162 lb (73.7 kg)
Ship tons	0.30

Shipped No. 2 of 4 wooden crates containing 1—computer.

Length	20 in. (50 cm)
Width	18 in. (45.72 cm)
Height	10¾ in. (27.31 cm)
Volume	2.23 cu ft
Gross weight	68 lb (30.9 kg)
Ship tons	0.06

Within Continental United States—Continued

Shipped No. 3 of 4 wooden crates containing: 2—cables, and 1—power supply.

Length	20 in. (50 cm)
Width	18 in. (45.72 cm)
Height	10¾ in. (27.31 cm)
Volume	2.23 cu ft
Gross weight	68 lb (30.9 kg)
Ship tons	0.06

Shipped No. 4 of 4 wooden crates containing: 2—cables, and 1—optical unit.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Outside Continental United States

Shipped No. 1 of 4 wooden crates containing: 1—adapter; 1—cable; 1—launch and guidance control training unit; and 1—tripod.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped No. 2 of 4 wooden crates containing 1—computer.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped No. 3 of 4 wooden crates containing: 2—cables, and 1—power supply.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

Shipped No. 4 of 4 wooden crates containing: 2—cables, and 1—optical unit.

Length	
Width	
Height	
Volume	
Gross weight	
Ship tons	

References: TM 9-6920-461-12.

TRAINER, TANK GUNNERY: 90-MM GUN, M26

(Illustration will be added at a later date)

Major Item

Model	*Line item No.*	*Federal stock No.*
M26	4-57950-08	6920-679-2600

General

TRAINER, TANK GUNNERY: 90-mm gun, M26, is a training aid used to train personnel in the operation of the turret, the 90-mm gun, and sighting and fire control equipment of the TANK, COMBAT, FULL TRACKED: 90-mm, M48 series.

Differences among models

Data plate location

Classification: Standard A (OTCM 37119).

CHARACTERISTICS

PERFORMANCE

EQUIPMENT

Sighting and Fire Control:

Basic Issue Items:

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

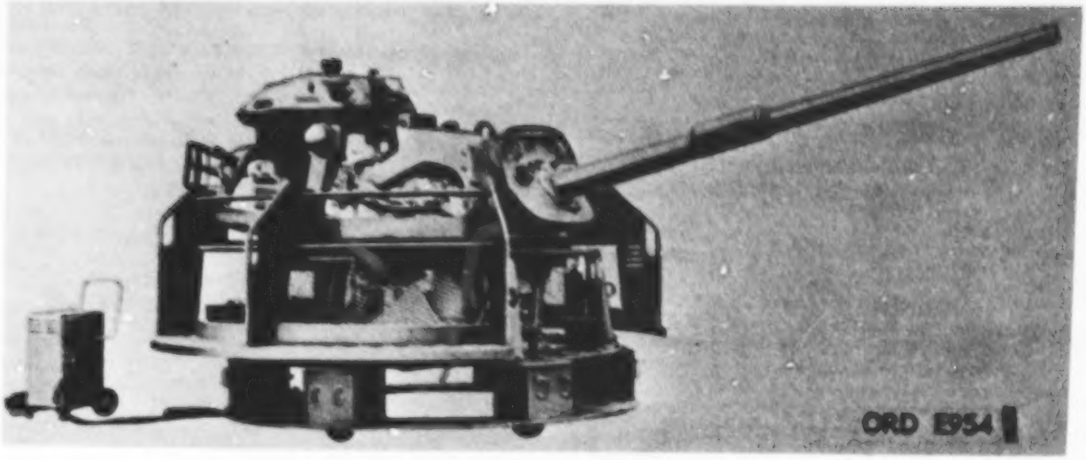
Shipped per
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped per
Length ....
Width ....
Height ....
Volume ....
Area ....
Gross weight ....
Ship tons ....

References:

TRAINER, TANK GUNNERY: 105-MM GUN, XM30



Major Item

Model	*Line item No.*	*Federal stock No.*
XM30	4-87950-25	6920-790-2259

General

TRAINER, TANK GUNNERY: 105-mm gun, XM30, is a training aid used to train personnel in the operation of the turret, the 105-mm gun, and the sighting and fire control equipment of TANK, COMBAT, FULL TRACKED: 105-mm gun, M60. The trainer is a modified turret from the tank M60 mounted on a stand. The turret has been provided with platforms and cutouts to allow the instructor to observe and guide the trainee under actual operating conditions. It is powered from a rectifier power supply which replaces vehicle power.

Differences among models

Data plate location

Classification: Standard A (OTCM 37888).

CHARACTERISTICS

Weight:	
Total	28,910 lb
Turret stand	7,116 lb
Canvas cover	96 lb
Length:	
Overall	296 in.
Gun tube (outside platform)	108.5 in.
Width	156 in.
Height:	
Overall on base	114 in.
Overall, on casters	119.875 in.
Diameter, traverse circle	418 in.
Clearance:	
Base ring to ground	5.875 in.
Gun tube to ground (gun tube level)	68 in.

ARMAMENT

CANNON, 105 MILLIMETER GUN: M68
MOUNT, GUN: 105-mm combination, M116

EQUIPMENT

Sighting and Fire Control:
(Same as for the TANK, COMBAT, FULL TRACKED: 105-mm gun, M60)*
Basic Issue Items: See TM 9-2350-215-10, C3

AMMUNITION

PERFORMANCE

INSTRUCTIONAL MATERIAL

STORAGE AND SHIPMENT DATA

Within Continental United States

Shipped 1 trainer per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

Outside Continental United States

Shipped 1 trainer per
Length ....
Width ....
Height ....
Volume ....
Gross weight ....
Ship tons ....

References: TM 9-2350-215-10.

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*For characteristics and data, see item in section 23.

APPENDIX I
REFERENCES

1. Publication Indexes

The following publication indexes should be consulted frequently for latest changes or revisions of references given in this appendix and for new publications relating to materiel covered in this manual:

Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings.	DA Pam 108-1
Military Publications:	
Index of Administrative Publications.	DA Pam 310-1
Index of Blank Forms	DA Pam 310-2
Index of Graphic Training Aids and Devices.	DA Pam 310-5
Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.	DA Pam 310-4
Index of Doctrinal, Training, and Organizational Publications.	DA Pam 310-3

2. Other Publications

The following publications contain information pertinent to this materiel:

Field Maintenance Floats: Major Items of Equipment Authorized for Stockage in Both Peacetime and Wartime.	SB 9-140
Military Symbols	FM 21-30
Military Terms, Abbreviations, and Symbols:	
Authorized Abbreviations and Brevity Codes.	AR 320-50
Dictionary of United States Army Terms.	AR 320-5
Military Training	FM 21-5
Military Training Aids	AR 350-15
Army Adopted Items of Materiel.	SB 700-20
Ordnance Corps Type Classified Materiel (U).	SB 9-176
Distribution Planning for Principal Items of Equipment.	AR 700-16
Security Classification of Ordnance Corps Procured Supply Items (U).	SB 9-131
Security Classification of Nuclear Items (U).	(S) TB9-38-1
Stock Control: Army Equipment Status Reporting System; List of Reportable Items (Materiel Readiness).	AR 711-140

BY ORDER OF THE SECRETARY OF THE ARMY:

G. H. DECKER,
General, United States Army,
Chief of Staff.

Official:
J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

DCSLOG (1)
CNGB (1)
USASA (1)
Tech Stf, DA (1) except
  CofOrd (9)
  CofT (none)
Ord Bd (1)
USCONARC (3)
ARADCOM (2)
ARADCOM Rgn (2)
OS Maj Comd (2)
OS Base Comd (2)
LOGCOMD (2)
MDW (1)
Armies (3)
Corps (2)
USA Corps (1)
Div (2)
Bde (2)
Regt/Gp/bg (2)
Bn (2)
Ord Co (2) except
  TOE: 9-12 (1); 9-17 (1);
  9-47 (1); 9-57 (1); 9-367 (1)
Instl (2)
SVC Colleges (2)
Br Svc Sch (2) except
  USAARMS (75)
  USAAMS (5)
  USAIS (5)
  ARADSCH (50)
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Ord Sec, GENDEP (2)
Ord Dep (2)
USA Ord Tng Comd (235)
Ord Comd (2)
Fld Comd, DASA (1)
USAIC (6)
Ord PG (1)
Ord Arsenals (2) except
  Raritan (10)
Springfield Armory (1)
Ord Dist (1)
USA Trans Tml Comd (2)
Army Tml (2)
POE (1)
OSA (1)
Mil Msn (1)
MAAG (1)
JBUSMC (1)
JUSMAGC (1)

NG: State AG (3); units—same as active Army except allowance is one copy to each unit.
USAR: None.
For explanation of abbreviations used, see AR 320-50.

PIN : 026338-000